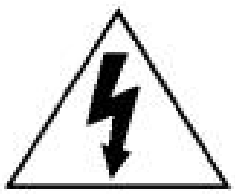
H.264 Network DVR

User Manual

Please read instructions thoroughly before operation and retain it for future reference.

The image shown above may differ from the actual product appearance.

IMPORTANT SAFEGUARD



CAUTION

RISK OF ELECTRIC SHOCK

CAUTION:

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture.

Only operate this apparatus from the type of power source indicated on the label.

The company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.

Graphic Symbol Explanation

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.

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This apparatus is manufactured to comply with the radio interference requirements.

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ftp://ftp.dvrtw.com.tw/GPL/AV074/

Disclaimer

We reserve the right to revise or remove any content in this manual at any time. We do not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this manual. The content of this manual is subject to change without notice.

Version

Firmware Version: 1015-1008-1001-1010-(null)-0000;

AP Version: 0086

TABLE OF CONTENTS

1. OVERVIEW 1

1.1 Product Description 1
1.2 Features 1
1.3 Specifications 2
1.4 Package Contents 3

2. FRONT AND REAR PANELS 4

2.1 Front Panel 4
2.2 Rear Panel 6

3. CONNECTIONS AND SETUP 7

3.1 SATA HDD Installation 7
3.2 Camera Connection 7
3.2.1 Regular Camera Connection 8
3.2.2 PTZ Camera Connection 8
RS485 lines with RJ11 line 8
RS485 with the rear panel of the DVR 8
3.3 Power Setup 9
3.4 Date and Time Setting 9
3.5 Password Setting 9
3.6 System Diagram 10

4. BASIC OPERATION 11

4.1 Live Page 11
4.2 Recording 11
4.3 Playback 12
4.4 Key Lock and Unlock 12
4.5 Upgrade 13
4.6 Search 13

5. MAIN MENU 14

5.1 Menu Configuration 14
5.2 Menu Operation Instruction 14

6. QUICK START MENU 15

6.1 Status 15
6.2 Manual Record 16
6.3 Timer 17
6.4 Date 18

7. ADVANCED MENU 20

7.1 Advanced Configuration 20
7.1.1 Camera 20
7.1.2 Detection 21
7.1.3 Alert 23
7.1.4 Network 23
7.1.5 Display 25
7.1.6 Record 26
7.1.7 Remote 27

7.2 System Info....27
7.3 Event Info....28
7.3.1 Quick Search....29
7.3.2 Event Search....30
7.3.3 HDD Info....30
7.3.4 Event Log....31
7.4 Backup....31
7.4.1 USB BACKUP....32
7.4.2 DISK BACKUP (Optional)....33

8. REMOTE OPERATION 34

8.1 Supplied Licensed Software AP....34
8.1.1 Installation & Network Connection....34
8.1.2 General AP Operation....35
Record....35
Playback....36
Network Backup....37
8.1.3 AP Control Panel....38
8.1.4 AP Functions....39
Image Display....39
Address Book....39
Miscellaneous Control....41
Information....66
DVR Control....67
8.2 IE Web Browser....68
8.3 Quick Timer Player....70
8.4 Mozilla Firefox....71

APPENDIX 1 PIN CONFIGURATION 74

APPENDIX 2 RECORDING TIME TABLE 75

APPENDIX 3 COMPATIBLE USB FLASH DRIVE BRAND 76

APPENDIX 4 COMPATIBLE HDD BRAND 77

APPENDIX 5 TROUBLESHOOTING 78

APPENDIX 6 DEFAULT VALUE 79

1. OVERVIEW

1.1 Product Description

This DVR series is a 4CH H.264 real time Digital Video Recorder. It greatly maximizes the video quality and minimizes the file size (expand the storage capacity) with the feature of H.264 video compression technology. To quickly backup, the DVD writer (optional) and USB port are built in for your convenience, or the network backup is also available. It also supports the connection to the SATA HDD & keyboard controller for your easy operation.

1.2 Features

- **H.264 Video Compression Technology**
  - At the local site, the file size is minimized and the record time is lengthened
  - At the remote site, with the features of small file size and low bit rate, it will be more adaptive to different kinds of network environment compared with conventional codec designs
- **Graphical & Multi-language OSD**
- **Remote Independent Operation**
  - Allows single-channel viewing of live displays without changing display settings on the licensed software AP provided
- **Free Upgrade to Advanced Functions**
  - Allows you to upgrade DVR functions without any charges
- **Multiplex Operation**
  - Allows live display, record, playback, backup, and network operations at the same time
- **Excellent Image Quality and Performance**
  - The CIF image quality is excellent for clear and detailed image
- **Intelligent Motion Trigger Recording**
  - R.E.T.R. (Remote Event Trigger Recording)
  - Activates event recording automatically when alarm is triggered, and sends alerts with images to the designated e-mails / FTP address
  - Customizable security settings are achieved with the advanced motion detection, the scheduled motion detection recording (with 4 individually adjustable parameters), and the quick search function
  - Supports pre-alarm recording (8MB)
- **Backup Devices**
  - Supports USB 2.0 flash drive, DVD writer (optional), and network
- **Remote Surveillance**
  - Supports remote surveillance up to 20 users simultaneously with licensed software AP, IE browser and Mozilla Firefox browser
- **Covert Recording**
  - Blank screen replaces live displays to achieve covert recording
- **A/V Support**
  - Supports 4 audio-in, 1 audio-out to record sounds
  - Supports VGA output to monitor (VGA interface built-in)
- **General**
  - Supports SATA HDDs
  - Supports IR remote controller and keyboard controller
  - System auto recovery after power failure
  - Supports PTZ camera operations through RS-485, and PTZ Hot Point function
  - Supports daylight saving function
  - Supports manual / timer / motion / alarm / network recording
  - Supports TCP/IP, PPPoE, DHCP and DDNS network connection.

1.3 Specifications

MODEL	Model 1	Model 2
Video System	NTSC / PAL (auto detection)	
Video Compression Format	H.264	
Video Input (Composite video signal 1 Vp-p 75Ω BNC)	4 Channels	
Video Loop Output (Composite video signal 1 Vp-p 75Ω BNC)	4 Channels	
Video Output (BNC)	Main Monitor Output: for stable display Call Monitor Output: for sequence display	
Video Output (VGA)	Built-in VGA output for LCD monitor	
Audio Input	4 Channels (Mono)	
Audio Output	1 Channel (Mono)	
Multiplex Operating	Supports live display, record, playback, backup, and network simultaneously	
Maximum Recording Rate (Frame)	30 IPS @ 720×480 <NTSC> 25 IPS @ 720×576 <PAL>	
Maximum Recording Rate (Field)	60 IPS @ 720×240 <NTSC> 50 IPS @ 720×288 <PAL>	
Maximum Recording Rate (CIF)	120 IPS @ 352×240 <NTSC> 100 IPS @ 352×288 <PAL>	
Recording Mode	Manual / Timer / Motion / Alarm / Remote	
Recording Quality Options	Best, High, Normal and Basic	
Pre-alarm Recording	YES (8 MB)	
HDD Type	SATA	
HDD Storage	Accommodates 2 SATA HDDs Supports Maximum HDD Capacity to 2 Tera Byte	Accommodates 1 SATA HDD Supports Maximum HDD Capacity to 1 Tera Byte
HDD Quick Cleaning	Delete HDD Data Efficiently (1TB within 2 seconds)	
Quick Search	Time / Motion / Alarm search mode	
USB Flash Drive Backup	YES	
External USB Interfaced Device Backup	YES	
DVD Writer Backup	NO	YES
Playback on PC	Windows Media Player compatible	
Network Transfer Format	H.264	
Ethernet	10/100 Base-T.	
Network Protocol	TCP/IP, PPPOE, DHCP and DDNS (Dynamic IP)	
Network Surveillance Interface	Licensed Software AP / IE & Firefox browser (20 users on-line simultaneously)	
Independent Network	Basic Independent	
Network Alarm Notification	E-mail and FTP server	
CMS (Central Management System)	YES (Maxmium: 16 different IPs)	
Network E-map Function	Customized map for IP selection	
R.E.T.R. (Remote Event Trigger Recording)	YES	
Operating System for Network Function	Windows Vista / XP / 2000	
IR Remote Control	YES	
Multilingual OSD	YES	
Motion Detection Area	16 × 12 grids per channel	
Motion Detection Sensitivity	4 adjustable parameters for accurate detection	
PTZ Control	Pelco-D / AVTECH	
External Alarm	4 inputs, 1 output	
Picture Zoom	2X digital zoom	
Key Lock (Password Protection)	YES	
Video Loss Detection	YES	
Camera Title	Supports up to 6 letters	
Video Adjustable	Hue / Color / Contrast / Brightness	
Date Display Format	YY/MM/DD, DD/MM/YY, MM/DD/YY, and Off	
Daylight Saving	YES	
Power Source (±10%)	DC 19V	
Power Consumption	< 42 W	
Operating Temperature	10℃ ~ 40℃ (50℉~104℉)	
Dimensions (mm)**	375(W) × 61 (H) × 281 (D)	
System Recovery	System auto recovery after power failure	
Optional Peripherals	Keyboard controller	

* The specifications are subject to change without notice.

1.4 Package Contents

- ☐ Digital video recorder (DVR)
- ☐ Adapter and power cord
- ☐ Free licensed software AP disc
- ☐ Manual & quick start & IR remote control manual
- ☐ Vertical panel sticker of remote controller
- ☐ Thermal conductive silicone rubber
- ☐ HDD bracket screws (spare parts)
- ☐ DSUB PIN connector
- ☐ AAA size battery * 2

Note: Before using the IR remote control, please install the batteries first.

2. FRONT AND REAR PANELS

2.1 Front Panel

1) LED Indicators

HDD: HDD is reading or recording
HDD Full: HDD is full.
ALARM: Once the alarm is triggered
TIMER: When timer recording is turned on
PLAY: Under playing status
REC: Under recording status

2) MENU

Press “MENU” button to enter the main menu.

3) ENTER

Press “ENTER” button to confirm the setting.
Press “ENTER” to change the position of the channel display.
Press “▲ / ▼ / ◄ / ► “ to select the channel which you would like to change.
Press “PAUSE/＋” or “STOP/－” to select the channel which you would like to show.

4) SLOW

Under the playback mode, press “SLOW“ button to show slow playback.

5) ZOOM

Press “ZOOM” button to enlarge the picture of selected channel (under the live mode).

6) ⊞ / －

Press “ ⊞ “ button to show the 4 channel display mode.
Press “ － ” button to change the setting in the menu.

7) SEQ / ＋

Press “SEQ” button to activate the call monitor function and press “SEQ” button again to escape the call monitor mode.
Press “＋ ” button to change the setting in the menu.

8) POWER

Press this button to turn on / off the DVR.
(Under the recording mode, please stop recording before turning off the DVR).

9) CH1 / CH2 / CH3 / CH4

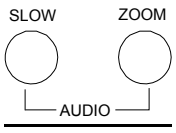
Press “**1** ” “**2** ” “**3** ” “**4** ” buttons to select the channel to display.

10) PLAY

Press this button to playback the recorded data.

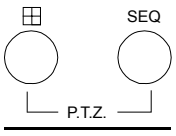
11) UP / PAUSE; DOWN / STOP; LEFT / FAST REWIND; RIGHT / FAST FORWARD

Press “▲ / ▼ / ◄ / ► “ to move the cursor up / down / left / right.
Under the playback mode, press “ PAUSE/＋” button to pause playback.
Under the playback mode, press “ STOP/－” button to stop playback.
Under the playback mode, press “FF“ button to fast forward.
Under the playback mode, press “REW“ button to fast rewind.

12) 

Press these two buttons to select live or playback sounds of the audio channels.

Live audio of the 1st audio channel	Playback audio of the 1st audio channel
Live audio of the 2nd audio channel	Playback audio of the 2nd audio channel
Live audio of the 3rd audio channel	Playback audio of the 3rd audio channel
Live audio of the 4th audio channel	Playback audio of the 4th audio channel
The audio channel is not selected.	

13) 

Press these two buttons at the same time to enter / exit the PTZ control mode.

In the PTZ control mode,

* Zoom in : Press "＋" button
* Zoom out: Press "－" button
* Adjust PTZ angle: Press "UP, DOWN, LEFT, RIGHT" buttons

14) MENU + ENTER

Press “MENU” + “ENTER” buttons on the DVR front panel to lock keys and to log in another username.

15) LIST (Event List Search)

To quick search the recorded files by event list, press this button to show all types of the event lists.

ALARM	List the information of the alarm-trigger-recorded files.
MANUAL	List the information of the manual-recorded files. The DVR will save one recorded file once any recording setting is changed
MOTION	List the information of the motion-trigger-recorded files.
SYSTEM	List the information of the system-recorded files. The DVR system will save one recorded file every one hour.
TIMER	List the information of the timer-recorded files

16) SNAP

Press “SNAP” to take a snapshot.

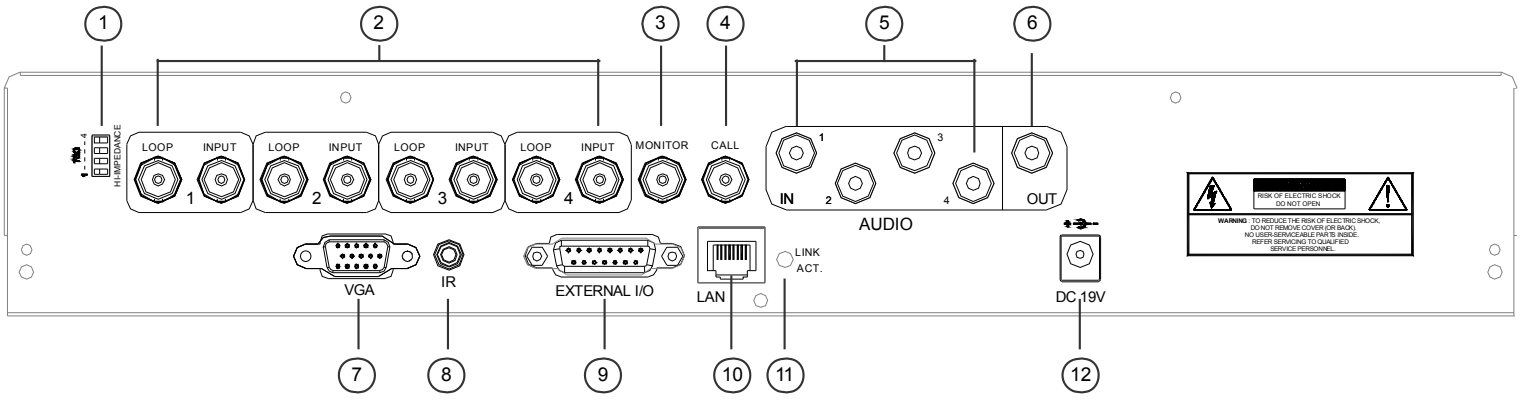
17) EJECT

For Model 2, press the “EJECT” button to open / close the DVD Writer.

18) USB

Support firmware update and file backup.

2.2 Rear Panel



1) 75Ω / HI-IMPEDANCE

When using Loop function, please switch to HI-IMPEDANCE. When you don't use Loop function, please switch to 75Ω.

2) INPUT (1 ~ 4CH): Connect to video sources, such as cameras.

LOOP (1 ~ 4CH): Video output.

Note: The DVR will automatically detect the video system of the camera, please make sure that the cameras are properly connected to the DVR and power-supplied before the DVR is turned on.

3) MONITOR

Connect to a CRT monitor for video output.

4) CALL

Connect to a call monitor.

5) Audio IN (1 / 2 / 3 / 4)

Connect to audio sources, such as cameras equipped with the audio function.

When users start recording, the audio input will also be recorded with corresponding video channel.

Note: The audio source connected to the "Audio 1" will be recorded with the video of the "CH1".
The audio source connected to the "Audio 2" will be recorded with the video of the "CH2".
The audio source connected to the "Audio 3" will be recorded with the video of the "CH3".
The audio source connected to the "Audio 4" will be recorded with the video of the "CH4".

6) Audio OUT

Connect to a monitor or speaker with 1 mono audio output.

7) VGA

Connect to the TFT monitor directly

8) IR

Connect the IR receiver extension line for remote control.

9) EXTERNAL I/O

Insert the supplied 15 PIN DSUB to this port for connecting external devices (external alarm, etc).

For detailed I/O port PIN configuration, please refer to "APPENDIX 1 PIN CONFIGURATION" at page 34.

10) LAN

Connect to Internet by LAN cable.

11) LINK / ACT LED light:

When the Internet is activated, the LED light will be on.

12) DC 19V

Connect to the supplied adapter.

3. CONNECTIONS AND SETUP

3.1 SATA HDD Installation

The SATA HDDs must be installed before the DVR is turned on.

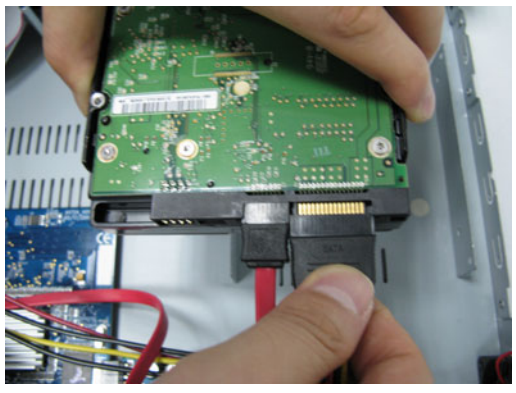
Step1 Remove the screws on the top cover of DVR, and remove the top cover.

Step1-1 Remove Screws

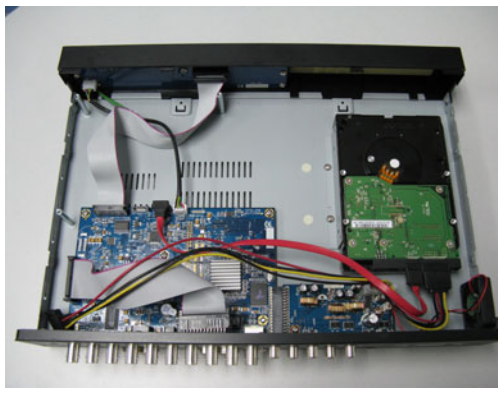
Step1-2 Remove the DVR Cover.

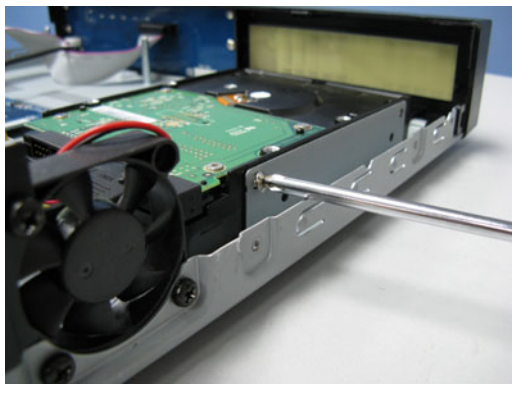
Step2 Then fix the brackets.

Step3 Get a compatible SATA HDD, and connect it to the power connector and data bus connector.



Step4 Put the HDD to the DVR, and have the SATA HDD fixed in the DVR.





3.2 Camera Connection

The cameras must be connected and power-supplied before the DVR is turned on. Connect the camera with the indicated power supply. And then connect the camera video output to the DVR video input port with a coaxial cable or RCA lines with BNC connectors (**The DVR will automatically detect the video system of the camera**).

Note: For detailed DVR video input / output ports, please refer to “2.2 Rear Panel” at page 6.
For detailed camera operation, please refer to its own manual.

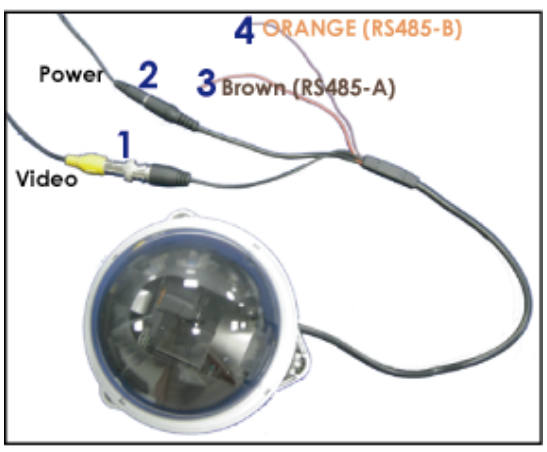
3.2.1 Regular Camera Connection

1) Connect the camera with indicated power supply.

2) Connect the camera video output to the DVR video input port with a coaxial cable and BNC connector.

3.2.2 PTZ Camera Connection

The user can easily and directly control the PTZ cameras through a coaxial cable.



1) Connect the PTZ camera with indicated power supply.

2) Connect the PTZ camera video output (Line1 in the above picture) to the DVR video input port with a coaxial cable and BNC connector.

3) Connect the RS485 lines to the rear panel of the DVR by using RJ 11 Line.

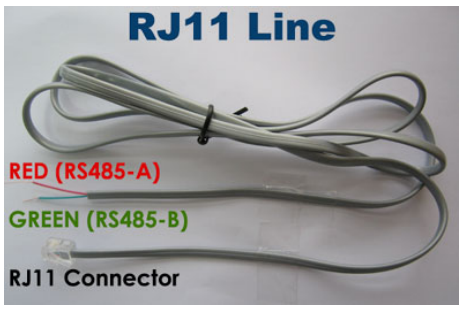
RS485 lines with RJ11 line

Connect RS485-A (brown color wire) of the PTZ control line to RS485-A (red color wire) of the RJ11 line.
RS485-B: Connect RS485-B (orange color wire) of the PTZ control line to RS485-B (green color wire) of the RJ11 line.

RS485 with the rear panel of the DVR

Solder the RS485-A (red) wires of the RJ11 line to PIN 11 of the D-Sub connector. Solder the RS485-B (green) wires of the RJ11 line to PIN 10 of the D-Sub connector (see the figure below). To protect the naked wires, use the insulation tape to cover on the twisted wires.

Then insert the D-Sub connector to the DVR's external I/O port.

RJ11 Line	**For 4CH DVR – 15 PIN D-Sub Connector**
RS485-A: **Red wire**	RS485-A: **PIN 11**
RS485-B: **Green wire**	RS485-B: **PIN 10**
	
The RJ11 line is not supplied in the sales package.	D-Sub connector is supplied with the DVR package.

4) For detailed camera title, ID, protocol and baud rate setup, please refer to section "7.1.7 Remote" at page 27.

3.3 Power Setup

This device should be operated only with the type of power source indicated on the manufacturer's label. Connect the indicated AC power cord to the power adapter, and plug into an electrical outlet. Press "POWER", and the LED "⏻" will be on as blue. It takes approximately 10 to 15 seconds to boot the system.

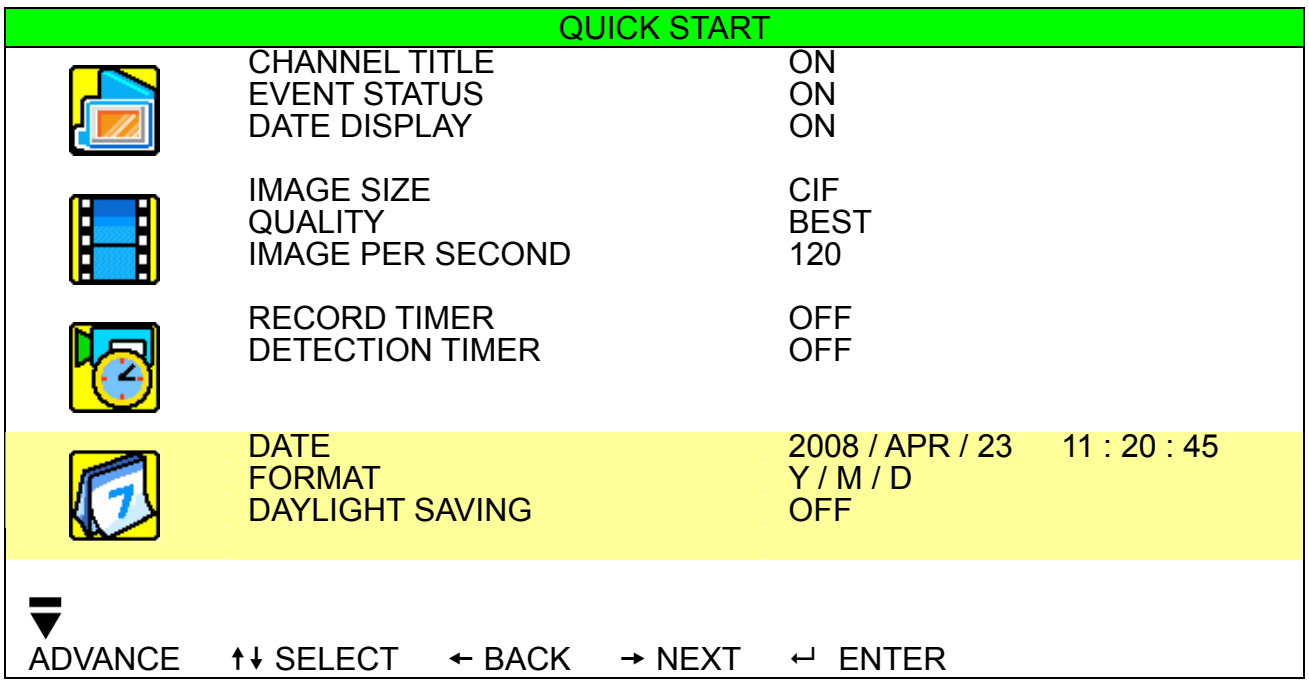
3.4 Date and Time Setting

Before operating your DVR, please set the date and time on your DVR first.

Note: Please DO NOT change the date or time of your DVR after the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search. If users change the date or time accidentally when the recording function is activated, it's recommended to clear all HDD data, and start recording again.

Note: If the time and date settings return o their default values after the DVR is rebooted, please charge the DVR for at least 24-48 straight hours. Please contact your local retailer if the situation still occurs.

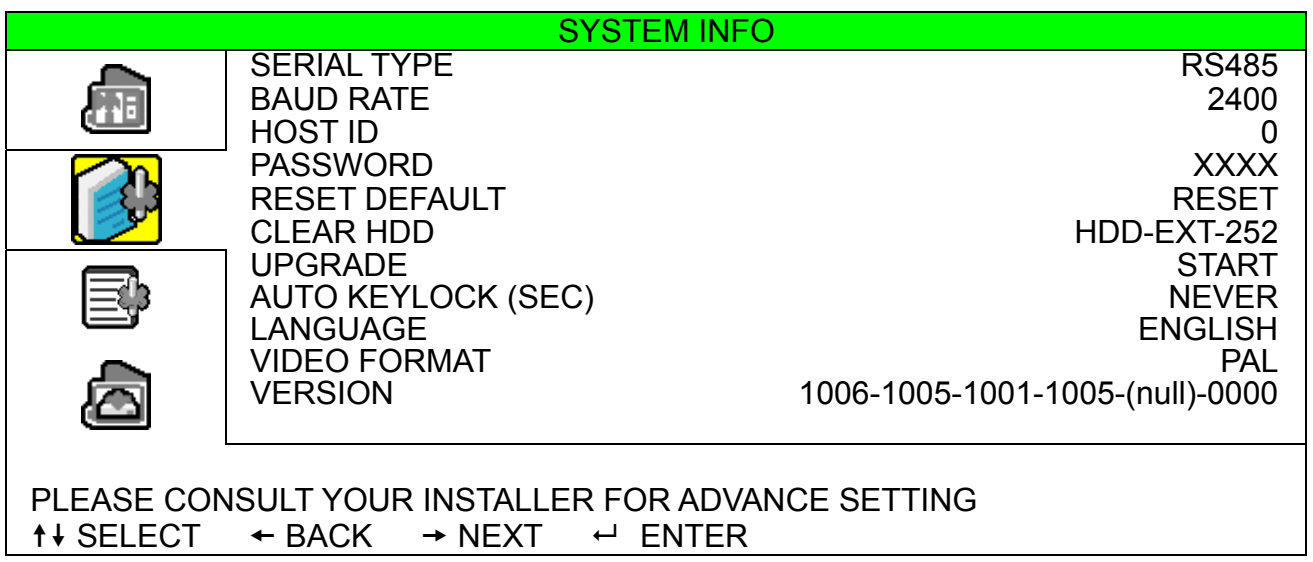
Press the "MENU" button and enter the password to go to the quick-start menu list. The default admin password is 0000. Move the cursor to the icon and you can set the date / time / daylight saving in this menu list.


QUICK START
CHANNEL TITLE ON
EVENT STATUS ON
DATE DISPLAY ON
IMAGE SIZE CIF
QUALITY BEST
IMAGE PER SECOND 120
RECORD TIMER OFF
DETECTION TIMER OFF
DATE 2008 / APR / 23 11 : 20 : 45
FORMAT Y / M / D
DAYLIGHT SAVING OFF
ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER

3.5 Password Setting

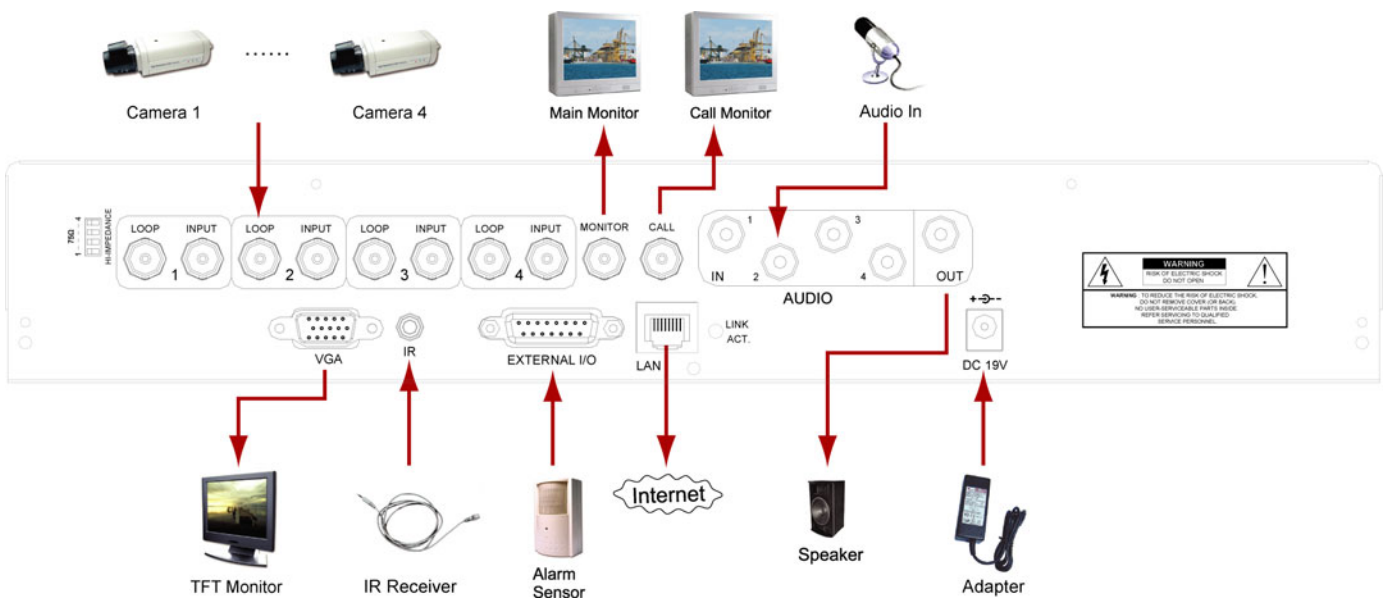
Press the "MENU" button and enter the password to go to the quick-start menu list. And then move the cursor to "ADVANCE" to enter the advanced setting menu.

In the "ADVANCE" menu, move the cursor to "" (SYSTEM INFO). Select "PASSWORD" and press the "ENTER" button to enter the submenu to set the password (four digits).



3.6 System Diagram

After you finish all the connections and setup, a surveillance system is established and you can experience the marvelous and useful functions of this DVR. The diagram below illustrates all the available connections of this DVR for you to picture your surveillance system.



4. BASIC OPERATION

4.1 Live Page

In this live page of the DVR, you can see the live viewing of 1 or 4-cut screen.

Icon	Function	Icon	Function	Icon	Function	Icon	Function
	Key lock		Key unlock		1st live audio channel		2nd live audio channel
	3rd live audio channel		4th live audio channel		1st playback audio channel		2nd playback audio channel
	3rd playback audio channel		4th playback audio channel		Audio channel unselected		Digital zoom mode
	Digital zoom unselected		HDD overwritten		Timer recording		Motion
	Recording		Alarm				

4.2 Recording

When the HDD overwritten function is activated, this device will overwrite 8GB data from the oldest for continuous recording without notice.

1) Continuous Recording Icon

When the DVR is properly connected with camera, you can see the icon " " (recording) on the screen.

2) Event Recording Icon

When the motion / alarm detection is activated, once motion or external alarm happens, you will see the icon " " (motion) or " " (external alarm) on the screen.

3) Timer Recording Icon

When the timer record is activated, you will see the icon "" (timer) on the screen.

Note: The audio source connected to the "Audio 1" will be recorded with the video of the "CH1".
The audio source connected to the "Audio 2" will be recorded with the video of the "CH2".
The audio source connected to the "Audio 3" will be recorded with the video of the "CH3".
The audio source connected to the "Audio 4" will be recorded with the video of the "CH4"

4) HDD Overwritten Icon

HDD Overwritten function can be set to ON / OFF. When this function is enabled (ON), the icon will display on the monitor screen. The HDD capacity information can be set to be in red text when the capacity reaches below certain level.

4.3 Playback

Press the "**PLAY**" button on the DVR control panel, and the device will playback the latest recorded video.

Note: There must be at least 8192 images of recorded data for playback to work properly. If not, the device will stop playback. For example, if the IPS is set to 30, the recording time should be at least 273 seconds (8192 images / 30 IPS) for the playback to work properly.

Note: The playback at the local site might not be so smooth if there's any remote surveillance simultaneously going on.

1) Fast Forward / Fast Rewind

You can increase the speed for fast forward and rewind on this device. In the playback mode:
Press "FF" once to get 4X speed forward and press twice to get 8X speed, etc. And the maximum speed is 32X.
Press "REW" once to get 4X speed rewind and press twice to get 8X speed, etc. And the maximum speed is 32X.

Note: During playback, the image size of the recording (Frame or CIF) will be shown on the screen.

2) Pause / Image Jog

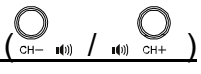
Press "PAUSE/＋" button to pause the playback.
In the Pause mode:
Press "FF" button once to get one frame forward.
Press "REW" button once to get one frame rewind.

3) Stop

Pressing "STOP" button under playback mode, the screen of this device will return to live monitoring mode.

4) Slow Playback

Press "SLOW" button to get 1/4X speed playback and press twice to get 1/8X speed playback.

5) Audio Playback ()

Use these two buttons to select the live or playback sound of the audio channels.

Live audio of the 1st audio channel	Playback audio of the 1st audio channel
Live audio of the 2nd audio channel	Playback audio of the 2nd audio channel
Live audio of the 3rd audio channel	Playback audio of the 3rd audio channel
Live audio of the 4th audio channel	Playback audio of the 4th audio channel
The audio channel is not selected.	

4.4 Key Lock and Unlock

1) Key Lock On

Press "MENU" + "ENTER" buttons on the DVR front panel to lock keys.
Auto key lock: Refer to Section "7.2 System Info" at page 27.

2) Key Lock Off

Enter the DVR password to exit "Key Lock" mode.

Note: For the password setting, please refer to the section "3.5 Password Setting" at page 9.

4.5 Upgrade

- **Firmware / Multilanguage OSD Upgrade**

1) Use USB to upgrade firmware or OSD

Step 1. Format the USB memory device as FAT 32 format first.
Step 2. Get the upgrade files from your distributor and save the upgrade files in your USB flash device (do not change the file name).
Step 3. In the " " (SYSTEM INFO) menu, move the cursor to "UPGRADE", and press the "ENTER" button to enter.
Step 4. Select "YES", and press the "ENTER" button again to confirm upgrade.

2) Use AP software to remotely upgrade firmware or OSD

Step 1. Save the upgrade files at your PC (do not change the file name) and then login to the AP software.
Step 2. Press " " (Miscellaneous Control) button to show the Miscellaneous Control panel. In the Miscellaneous Control panel, press " " (Tools) button on the Miscellaneous Control panel to enter the upgrade window.
Step 3. Enter the user name, password, IP address and port number of the DVR.
Step 4. Press "Add" to select the provided firmware and OSD files.
Step 5. Then press "Upgrade Firmware" button to start upgrade.

4.6 Search

1) Search by List

Press "LIST" button on the DVR control panel to show the list for all types of the recorded files. Choose the list you want to view and press the "ENTER" button to start playback.

ALARM	List the information of the alarm-trigger-recorded files.
MANUAL	List the information of the manual-recorded files. The DVR will save one recorded file once any recording setting is changed
MOTION	List the information of the motion-trigger-recorded files.
SYSTEM	List the information of the system-recorded files. The DVR system will save one recorded file every one hour.
TIMER	List the information of the timer-recorded files.

2) Search by Time

In the " " (EVENT INFO) menu list, move the cursor to "QUICK SEARCH", and press the "ENTER" button to enter the quick search menu. You can search any specific events by time (Year / Month / Day / Hour / Min) and directly play the file you find.

3) Search the Record Event by Log on the AP Software

Press " " (Miscellaneous Control) button to show the Miscellaneous Control panel. In the Miscellaneous Control panel, press " " (Status List) button to enter the "Status List" page. In this page, you can see the list of three different types of recording (User / Motion / Alarm) and press "Play" button to directly playback the file.

5. MAIN MENU

5.1 Menu Configuration

QUICK START MENU		STATUS	CHANNEL TITLE
			EVENT STATUS
		RECORD	IMAGE SIZE
			QUALITY
			IMAGE PER SECOND
		TIMER	RECORD TIMER
			DETECTION TIMER
		DATE	DATE
			FORMAT
			DAYLIGHT SAVING
ADVANCED MENU		ADVANCE CONFIG	CAMERA
			DETECTION
			ALERT
			NETWORK
			DISPLAY
			RECORD
		SYSTEM CONFIG	SERIAL TYPE
			BAUD RATE
			HOST ID
			PASSWORD
			RESET DEFAULT
			CLEAR HDD
			UPGRADE
			AUTO KEYLOCK (SEC)
			LANGUAGE
			VIDEO FORMAT
			VERSION
		EVENT LOG	QUICK SEARCH
			HDD INFO
			EVENT LOG
		BACKUP	USB BACKUP

5.2 Menu Operation Instruction

ITEM	FUNCTION
QUICK START MENU:	**View & change the settings of the quick start menu items**
MENU	Enter / exit the quick start menu
▲ ▼	Make the selection / Change the setting
◄ ►	Go to the upper layer or sub-layer / Make the selection
ENTER	Confirm the password entering
▼ ADVANCED MENU:	**In the quick start menu, move the cursor to the icon "▼" and press "▼" button to enter the advanced setting menu.**
ENTER	Go to the sub-layer of the advanced menu
MENU	Under the sub-layer of the advanced setting menu, use this button to confirm the settings and go back to the upper layer.
→ NEXT	Move the cursor to this item and press the "ENTER" button to go the next page.
← BACK	Move the cursor to this item and press the "ENTER" button to go the next page.
	Other operations in the advanced menu are the same as in the quick start menu.

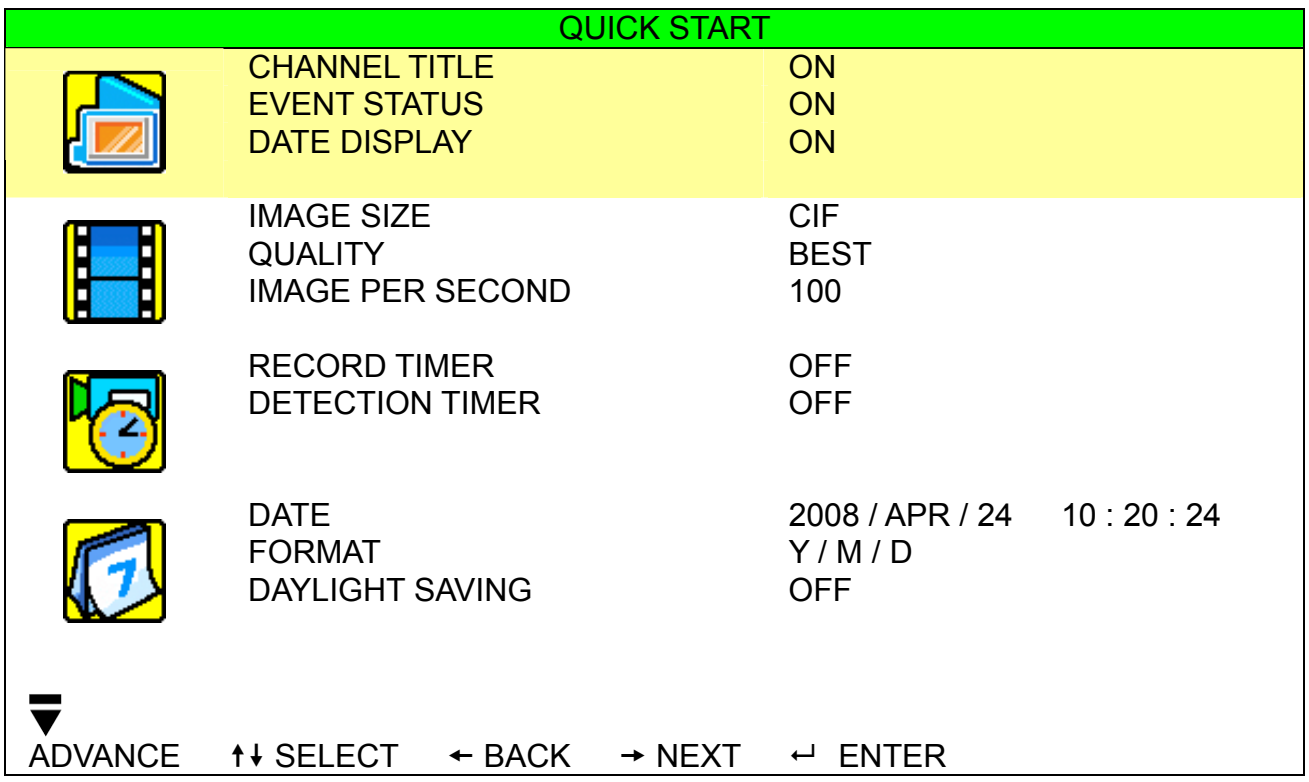
6. QUICK START MENU

Press the “MENU” button and enter the password to go to the quick-start menu list. The default admin password is 0000. Users can change the password later. Please refer to the section “7.2 System Info” at page 27.

6.1 Status

In this menu list, you can check and change some display settings.

Move the cursor to icon and you will see the following screen:


QUICK START
CHANNEL TITLE ON
EVENT STATUS ON
DATE DISPLAY ON
IMAGE SIZE CIF
QUALITY BEST
IMAGE PER SECOND 100
RECORD TIMER OFF
DETECTION TIMER OFF
DATE 2008 / APR / 24 10 : 20 : 24
FORMAT Y / M / D
DAYLIGHT SAVING OFF
ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) CHANNEL TITLE

Select to display the channel title or not (ON / OFF).

2) EVENT STATUS

Select to display the symbols of the event or not (ON / OFF).

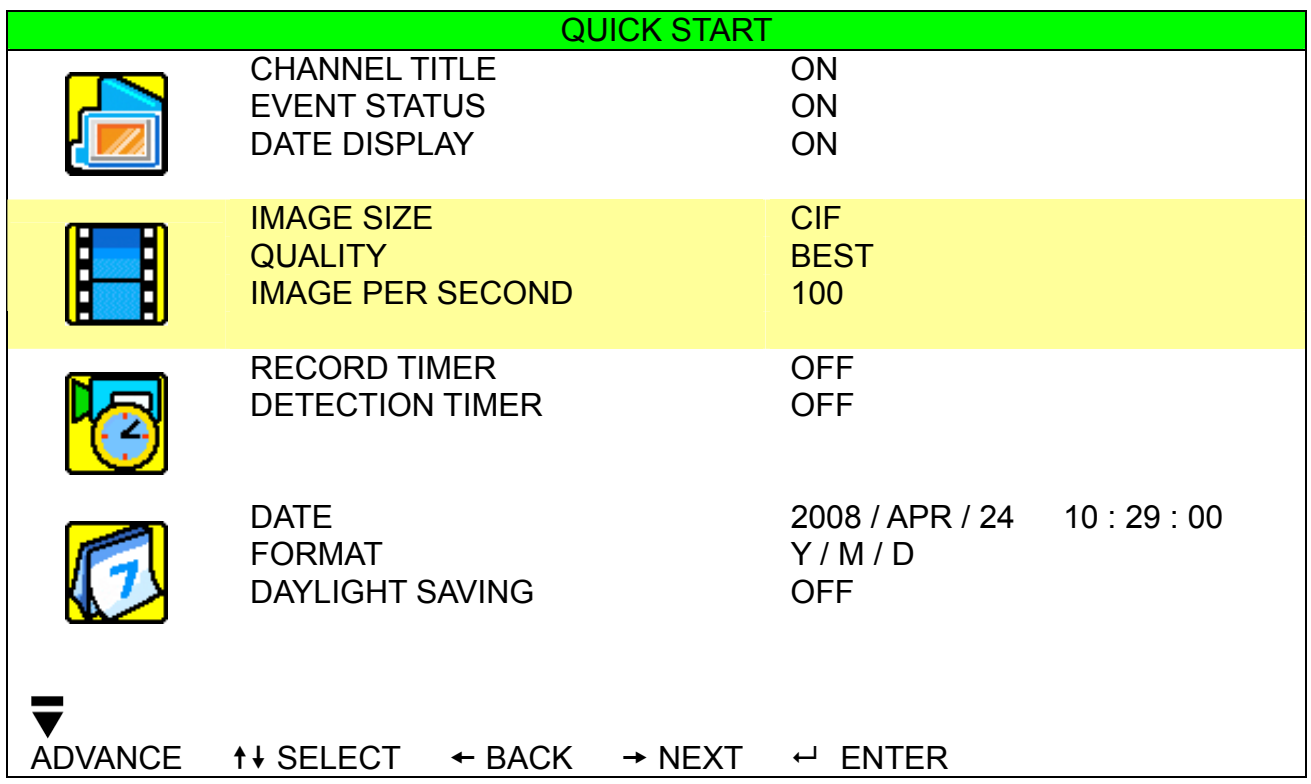
3) DATE DISPLAY

Select to display the date or not (ON / OFF).

6.2 Manual Record

In this menu list, you can set record settings.

Move the cursor to icon and you will see the following screen:


QUICK START
CHANNEL TITLE ON
EVENT STATUS ON
DATE DISPLAY ON
IMAGE SIZE CIF
QUALITY BEST
IMAGE PER SECOND 100
RECORD TIMER OFF
DETECTION TIMER OFF
DATE 2008 / APR / 24 10 : 29 : 00
FORMAT Y / M / D
DAYLIGHT SAVING OFF
ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) IMAGE SIZE

Select one of the image sizes: FRAME or CIF.

2) QUALITY

Select one of the 4 quality options: BEST, HIGH, NORMAL and BASIC.

3) IMAGE PER SECOND

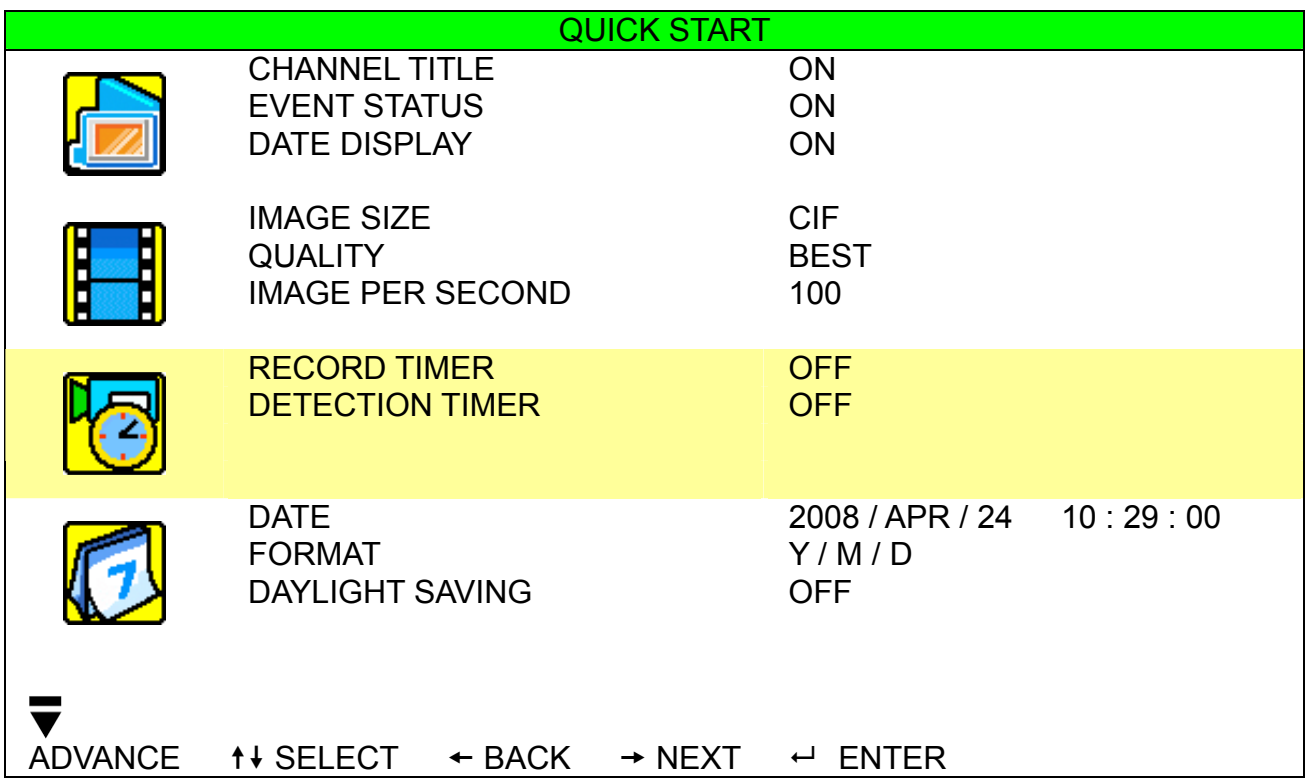
Select the images per second for MANUAL RECORD. The options are as following:

NTSC	IPS	PAL	IPS
FRAME	3, 7, 15, 30	FRAME	3, 6, 12, 25
CIF	15, 30, 60, 120	CIF	12, 25, 50, 100

6.3 Timer

In this menu list, you can schedule different sets of time for recording and detection function.

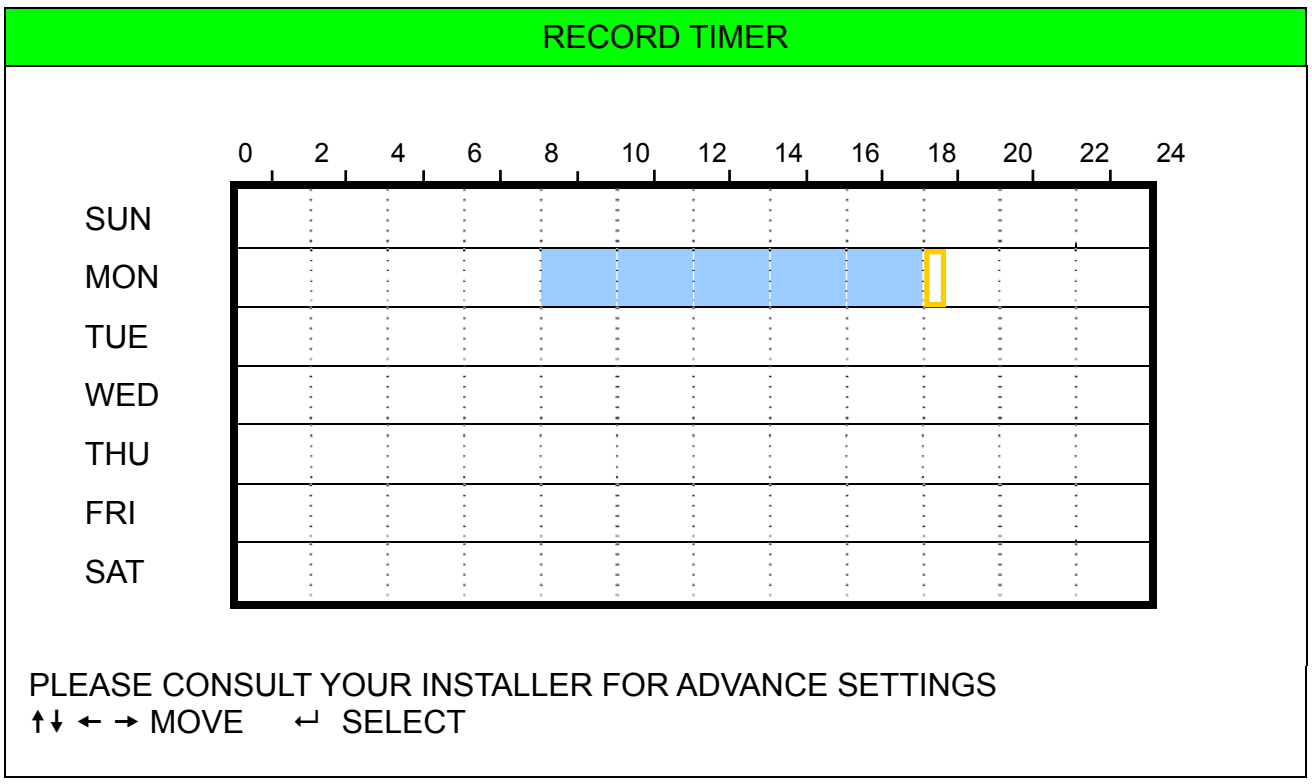
Move the cursor to icon and you will see the following screen:


QUICK START
CHANNEL TITLE ON
EVENT STATUS ON
DATE DISPLAY ON
IMAGE SIZE CIF
QUALITY BEST
IMAGE PER SECOND 100
RECORD TIMER OFF
DETECTION TIMER OFF
DATE 2008 / APR / 24 10 : 29 : 00
FORMAT Y / M / D
DAYLIGHT SAVING OFF
ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) <u>RECORD TIMER</u>

Use the ▲ ▼ buttons to change the setting (ON / OFF). When it's set to "ON", press the "ENTER" button to go to its submenu for further settings.



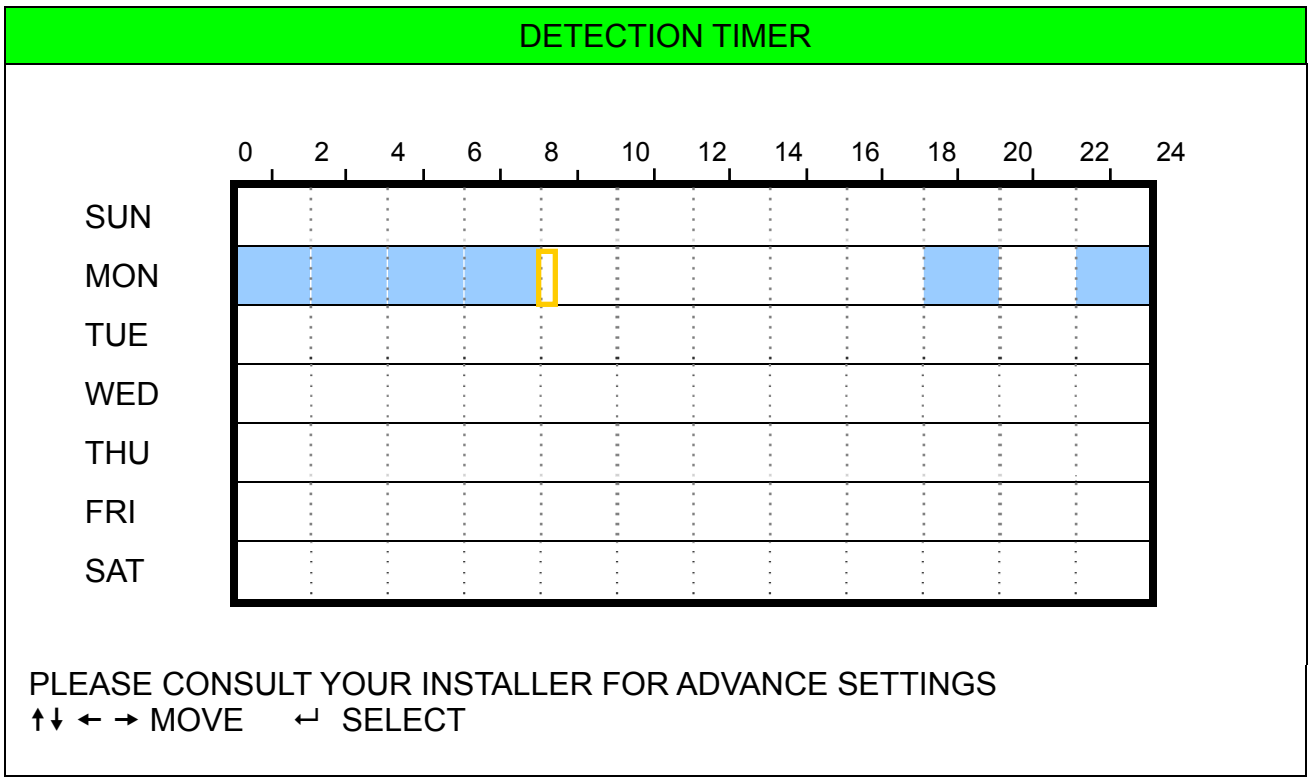
X axis: 0 ~ 24 hours. Each time interval within a square is two hours (divided into four 30-minutes).

Y axis: Monday ~ Sunday.

Operation: Move the cursor to the start time point, and press enter to set the start time point (marked in red color). Then, press ▲ ▼◄ ► buttons to set the timer-recording schedule. After setup, press the "ENTER" button again to create an ending time point (marked in yellow color) and press the "MENU" button to exit.

2) DETECTION TIMER

Use the▲ ▼ buttons to change the setting (ON / OFF). When it's set to "ON", press the "ENTER" button to go to its submenu for further settings.



X axis: 0 ~ 24 hours. Each time interval within a square is two hours (divided into four 30-minutes).

Y axis: Monday ~ Sunday.

Operation: Move the cursor to the start time point, and press enter to set the start time point (marked in red color). Then, press ▲ ▼◄ ► buttons to set the timer-recording schedule. After setup, press the "ENTER" button again to create an ending time point (marked in yellow color) and press the "MENU" button to exit.

Note: This function here is only for detection timer setup and activation. For motion detection function setup and activation, please refer to section "7.1.2 Detection" at page 21.

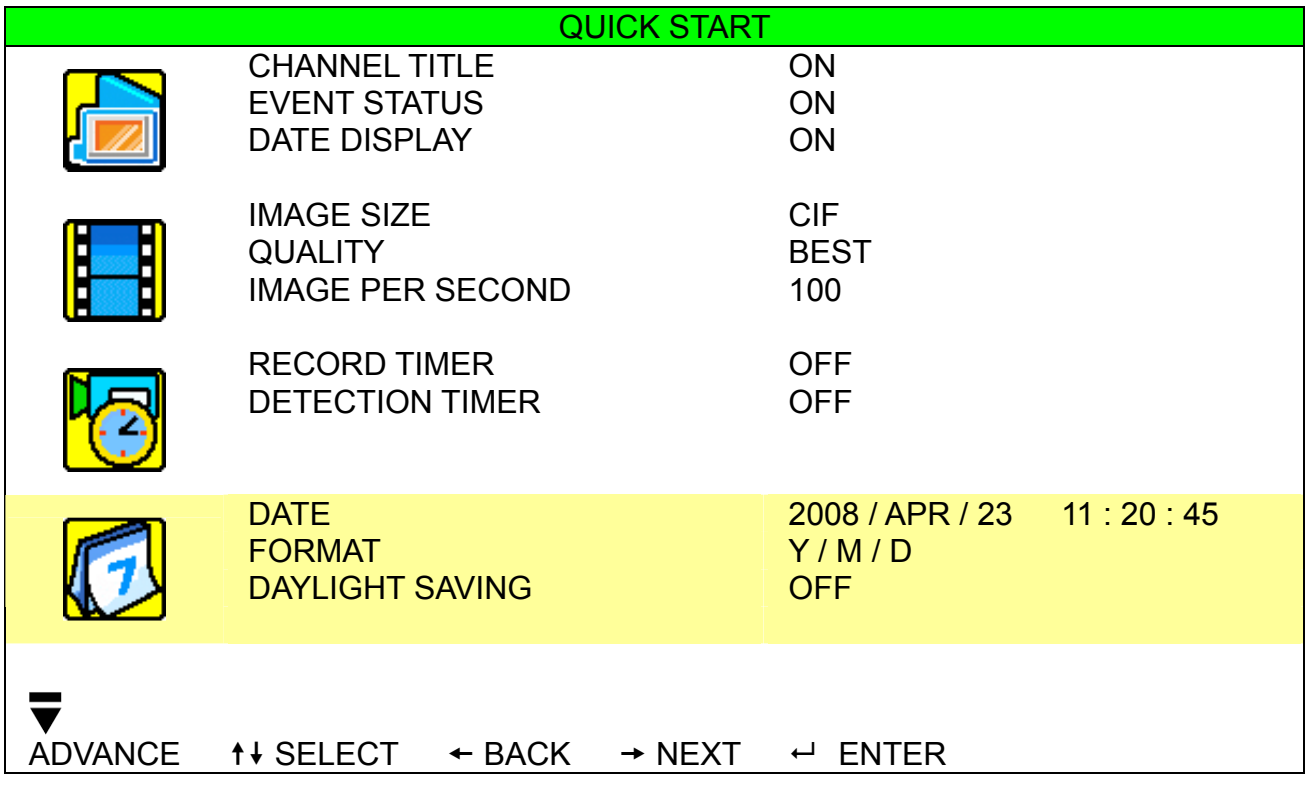
6.4 Date

In this menu list, you can set up the system date and time for this device.

Note: Please DO NOT change the date or time of your DVR after the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search. If users change the date or time accidentally when the recording function is activated, it's recommended to clear all HDD data, and start recording again.

Note: If the time and date settings return o their default values after the DVR is rebooted, please charge the DVR for at least 24-48 straight hours. Please contact your local retailer if the situation still occurs.

Press the “MENU” button to enter the main menu list. Move the cursor to icon and you will see the following screen:


QUICK START
CHANNEL TITLE ON
EVENT STATUS ON
DATE DISPLAY ON
IMAGE SIZE CIF
QUALITY BEST
IMAGE PER SECOND 100
RECORD TIMER OFF
DETECTION TIMER OFF
DATE 2008 / APR / 23 11 : 20 : 45
FORMAT Y / M / D
DAYLIGHT SAVING OFF
ADVANCE ↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) DATE

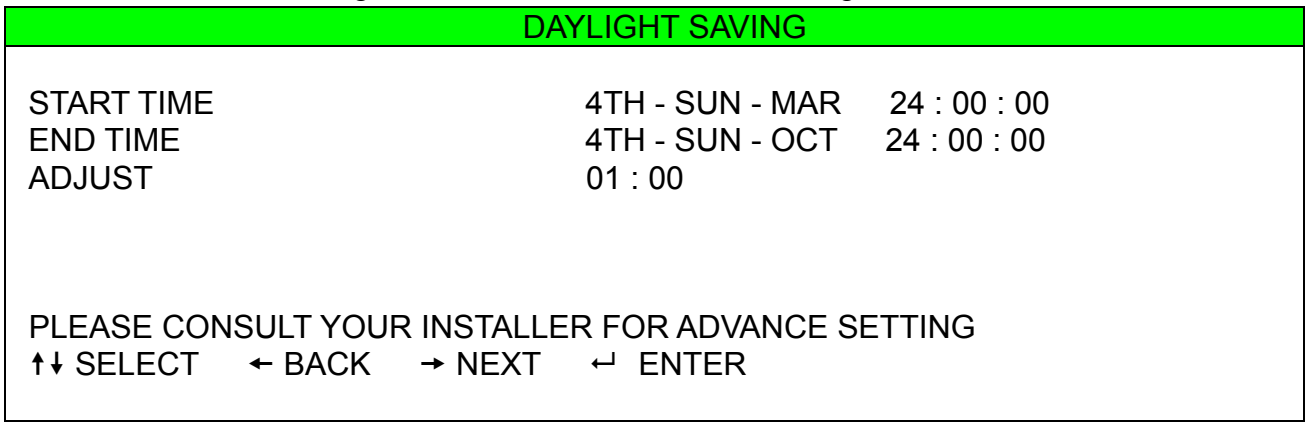
Set the current date and time. The default order is “YEAR – MONTH – DATE HOUR : MIN : SEC”.

2) FORMAT

Select one date format from the following 3 options: Y-M-D, M-D-Y, D-M-Y.

3) DAYLIGHT SAVING

Use the ▲ ▼ buttons to specify whether to use daylight-saving time (ON / OFF). When it’s set to “ON”, press the “ENTER” button to go to its submenu for further settings.


DAYLIGHT SAVING
START TIME 4TH - SUN - MAR 24 : 00 : 00
END TIME 4TH - SUN - OCT 24 : 00 : 00
ADJUST 01 : 00
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

Set the start time and end time, and adjust the daylight saving time in hour. The above example means during the daylight-saving time period (starting from the 4th Sunday of March and ending on the 4th Sunday of October), the system time will plus one hour. After setup, press the “ENTER” button again to create an ending time point and press the “MENU” button to exit.

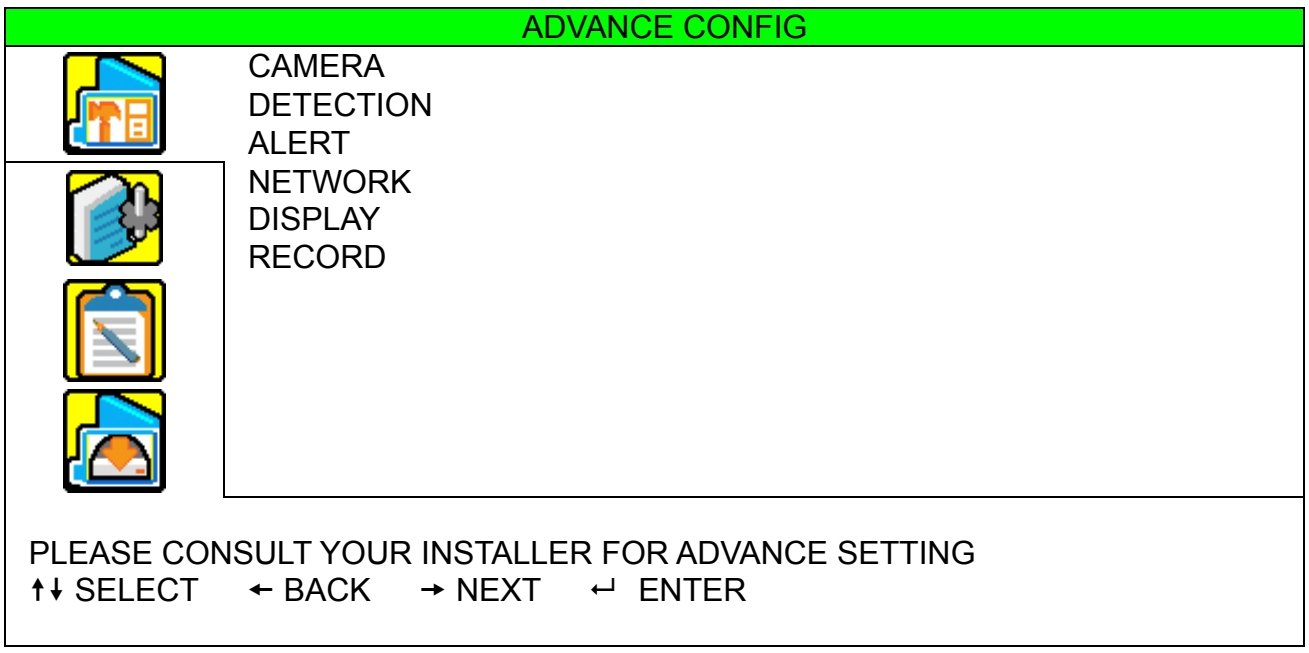
7. ADVANCED MENU

Press the “MENU” button and enter the password to go to the quick-start menu list. And then move the cursor to “ADVANCE” to enter the advanced setting menu. The default admin password is 0000. Users can change the password later. Please refer to the section “7.2 System Info” at page 27.

It is recommended that consult your installer to setup this advanced menu.

7.1 Advanced Configuration

In this menu list, you can check or change CAMERA / DETECTION / ALERT / NETWORK / DISPLAY settings. Move the cursor to “ ” (ADVANCE CONFIG) icon and you will see the following screen:



7.1.1 Camera

In this submenu, you can make advanced camera settings, such as changing the camera title, or adjust the brightness. Move the cursor to “CAMERA”, and press the “ENTER” button. You will see the following screen:

CAMERA

TITLE	BRIG	CONT	SATU	HUE	COV.	REC
CH1	128	098	128	128	OFF	ON
CH2	128	098	128	128	OFF	ON
CH3	128	098	128	128	OFF	ON
CH4	128	098	128	128	OFF	ON

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below. While you changing the camera setting, you can ***preview*** the changing on the screen.

1) TITLE

You can change the default camera naming here. The default title is the channel number.
Move the cursor to the camera title you want to change, and press the “ENTER” button on the control panel of the DVR to access the character selection screen. Assign a new name to the camera up to six characters (letters or symbols or numbers).

2) BRIG / CONT / SATU / HUE

You can adjust the brightness/contrast/saturation/hue of each channel here. The default value of CONT is 098, and others are 128. The value is adjustable from 0 to 255.

3) COV

Select if you want to mask the selected channel under recording (YES / NO). When this function is activated, the wording “COV.” will be shown on the channel screen.

4) REC

Select if you want to enable recording for the selected channel (YES / NO). When this function is activated, the symbol “ ” will be shown on the channel screen.

7.1.2 Detection

In this submenu, you can set up detection-related functions.
Move the cursor to “DETECTION”, and press the “ENTER” button. You will see the following screen:

DETECTION

TITLE	DET	AREA	LS	SS	TS	RE	ALARM
CH1	OFF	SETUP	07	03	02	10	OFF
CH2	OFF	SETUP	07	03	02	10	OFF
CH3	OFF	SETUP	07	03	02	10	OFF
CH4	OFF	SETUP	07	03	02	10	OFF
			07				

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) TITLE

Show the camera title of each channel set in “CAMERA”.

2) DET

Select if you want to activate the motion detection function for the selected channel (ON/OFF).

3) AREA

There are 16 × 12 grids per camera for all channels. Pink blocks represent the area that is not being detected while the transparent blocks are the area under detection.
Press the “ENTER” button on the control panel of the DVR to set the detection area. You will see similar screens as the following:

Transparent blocks are the area under detection.

Press the “ENTER” button to confirm the start area.

Press ◄ / ► buttons to choose the width of the area

Press ▲ / ▼ buttons to choose the height of the area.

You can also set up multi-detection

When the motion is triggered, you will grids are flashing.

4) LS (Level of Sensitivity)

“LS” is to set the sensitivity of comparing two different images. The smaller the value is, the higher sensitivity for motion detection. The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default value is 07.

5) SS (Spatial Sensitivity)

“SS” is to set the sensitivity for detecting the size of one object (the number of the grids) on the screen. The smaller the value is, the higher sensitivity for motion detection.
The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 03.

Note: The default setting of SS is 03, which means once an object is detected more than 3 grids, the system will get triggered. So the value of SS must be less than the number of grids that you set up for the motion detection area.

6) TS (Time of Sensitivity)

“TS” is to set the sensitivity regarding how long one object stays in the detection area and triggers the recording. The smaller the value is, the higher sensitivity for motion detection.
The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 02.

7) RE (Reference)

“RE” is to set a reference for detection. The default value is 10, which means the DVR will compare 10 continuous images at one time according to the sensitivity of LS, SS, TS simultaneously.
The bigger the value is, the higher sensitivity for motion detection. The highest sensitivity is 61.

8) ALARM

Select LOW / HIGH for the alarm polarity. The default alarm value is OFF.

7.1.3 Alert

In this menu list, you can set alerts for different kinds of situations, such as when HDD is full.

Move the cursor to “ALERT”, and press the “ENTER” button. You will see the following screen:

ALERT	
EXT. ALERT	ON
INT. BUZZER	ON
KEY BUZZER	ON
VLOSS BUZZER	ON
MOTION BUZZER	ON
ALARM BUZZER	ON
ALARM DURATION (SEC)	05

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) EXT. ALERT

Select to enable or disable the sound when any external alarm is triggered (ON / OFF).

2) INT. BUZZER

Select to enable or disable the sound (ON / OFF) for all the internal buzzers: KEY BUZZER, VLOSS BUZZER, MOTION BUZZER, and ALARM BUZZER.

Note: When this item is set to OFF, item 3) to item 6) will be disabled even though they are set to ON.

---

3) KEY BUZZER

Select to enable or disable the sound when pressing the buttons on the front panel (ON / OFF).

4) VLOSS BUZZER

Select to enable or disable the sound when video loss happened (ON / OFF).

5) MOTION BUZZER

Select to enable or disable the sound when any motion alarm is triggered (ON / OFF).

6) ALARM BUZZER

Select to enable or disable the sound when any internal alarm is triggered (ON / OFF).

7) ALARM DURATION (SEC)

Press “ENTER” or “＋” / “－” button to set the duration time of alarm recording in second (5 / 10 / 20 / 40).

7.1.4 Network

In this menu list, you can set up the network.

Move the cursor to “NETWORK”, and press the “ENTER” button to enter the submenu. You will see the following screen:

NETWORK	
NETWORK TYPE	STATIC
IP	192 . 168 . 001 . 080
GATEWAY	192 . 168 . 001 . 080
NETMASK	255 . 255 . 255 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

- **STATIC**

1) NETWORK TYPE

Select the network type as STATIC and set all the information needed in the DVR.

2) NETWORK INFORMATION (IP / GATEWAY / NETMASK)

Key in all the network information obtained from your ISP (Internet Service Provider).

3) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

4) PORT

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

STATIC	
NETWORK TYPE	STATIC
IP	192 . 168 . 001 . 080
GATEWAY	192 . 168 . 001 . 080
NETMASK	255 . 255 . 255 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

- **PPPOE**

1) NETWORK TYPE

Select the network type as PPPOE.

2) USER NAME / PASSWORD

Set “username” and “password” subscribed from your ISP supplier

3) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

4) PORT

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

PPPOE	
NETWORK TYPE	PPPOE
USER NAME	ac123456
PASSWORD	tech123456
IP	000 . 000 . 000 . 000
GATEWAY	000 . 000 . 000 . 000
NETMASK	000 . 000 . 000 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

Note: The PPPOE function needs to have one “username” and one “password” subscribed from one ISP supplier and a “DDNS account” to transforming the dynamic IP corresponding to a specific “Hostname”.
For detailed PPPOE settings, please refer to “Network” at page 49.
For detailed DDNS settings, please refer to “DDNS” at page 51.

- **DHCP**

1) NETWORK TYPE

Select the network type as DHCP.

2) DNS (PRIMARY DNS / SECONDARY DNS)

Key in the IP address of the domain name server obtained from your ISP (Internet Service Provider).

3) PORT

The valid number ranges from 1 to 9999. The default value is 80. Typically, the TCP port used by HTTP is 80. However in some cases, it is better to change this port number for added flexibility or security.

See the example below:

DHCP	
NETWORK TYPE	DHCP
IP	000 . 000 . 000 . 000
GATEWAY	000 . 000 . 000 . 000
NETMASK	000 . 000 . 000 . 000
PRIMARY DNS	168 . 095 . 001 . 001
SECONDARY DNS	139 . 175 . 055 . 244
PORT	0080

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

Note: This DHCP function needs to be supported by a router or a cable modem network with DHCP services and a “DDNS account” to transforming the dynamic IP corresponding to a specific “Hostname”.
For detailed DHCP settings, please refer to “Network” at page 49.
For detailed DDNS settings, please refer to “DDNS” at page 51.

7.1.5 Display

In this menu list, you can set up the settings of display.
Move the cursor to “DISPLAY”, and press the “ENTER” button to enter the submenu. You will the following screen:

DISPLAY	
DE-INTERLACE	ON
QUAD DWELL DURATION (SEC)	03
FULL SCREEN DWELL DURATION (SEC)	03

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) DE-INTERLACE

Select to enable or disable the de-interlace function (ON / OFF).

Note: If you set the recording image size as “FRAME”, please TURN ON de-interlace function.
If you set the recording image size as “CIF”, please TURN OFF the de-interlace function.

2) QUAD DWELL DURATION (SEC)

Set the quad dwell duration time (3 / 5 / 10 / 15 seconds).

3) FULL SCREEN DWELL DURATION (SEC)

Set the full screen dwell duration time (3 / 5 / 10 / 15 seconds).

7.1.6 Record

In this menu list, you can set up the settings of display.

Note: Please DO NOT change the date or time of your DVR after the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search. If users change the date or time accidentally when the recording function is activated, it's recommended to clear all HDD data, and start recording again.

Move the cursor to "DISPLAY", and press the "ENTER" button to enter the submenu. You will the following screen:

RECORD	
MANUAL RECORD ENABLE	ON
EVENT RECORD ENABLE	ON
TIMER RECORD ENABLE	ON
EVENT RECORD IPS	100
TIMER RECORD IPS	100
PRE-ALARM RECORD	ON
OVERWRITE	ON
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING	
↑↓ SELECT ← BACK → NEXT ↵ ENTER	

The submenu items are described below:

1) MANUAL RECORD ENABLE

Set the manual recording function on / off.

2) EVENT RECORD ENABLE

Set the event recording function on / off.

3) TIMER RECORD ENABLE

Set the timer recording function on / off.

4) EVENT RECORD IPS

Select the images per second for EVENT RECORD (Recording that is triggered by alarm or motion).
The options are as following:

NTSC	IPS	PAL	IPS
FRAME	3, 7, 15, 30	FRAME	3, 6, 12, 25
CIF	15, 30, 60, 120	CIF	12, 25, 50, 100

5) TIMER RECORD IPS

Select the images per second for TIMER RECORD (Recording that is activated according to the scheduled time).
The options are as following:

NTSC	IPS	PAL	IPS
FRAME	3, 7, 15, 30	FRAME	3, 6, 12, 25
CIF	15, 30, 60, 120	CIF	12, 25, 50, 100

6) PRE-ALARM RECORD

Select to enable or disable the pre-alarm function (ON / OFF).
When pre-alarm and event recording functions are both activated, the DVR will record 8MB data before any alarm / motion is triggered.

7.1.7 Remote

In this menu list, you can set up remote devices to work properly.
Move the cursor to “REMOTE”, and press ”ENTER”. You will see the following screen:

REMOTE				
TITLE	DEVICE	ID	PROTOCOL	RATE
CH1	PTZ	000	NORMAL	2400
CH2	CAMERA	000	NORMAL	2400
CH3	CAMERA	000	NORMAL	2400
CH4	CAMERA	000	NORMAL	2400

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) TITLE

Show the camera title of each channel set in “CAMERA”.

2) DEVICE

Select the device type (CAMERA / PTZ) according to the connected camera for each channel.

3) ID

Set the ID number (0 ~ 255) for a PTZ camera.
After connecting to a PTZ camera correctly, the default ID of the PTZ camera will be shown on the screen.

4) PROTOCOL

Select NORMAL (our protocol) or P-D (PELCO-D) protocol.

5) RATE

Set the baud rate of each channel (2400 / 4800 / 9600 / 19200 / 57600). For the connected cameras, such as PTZ and speed dome cameras, etc., please make sure their baud rate setting is the same as the setting here.

7.2 System Info

In this menu list, you can check or change some system settings.
Move the cursor to “ ” (SYSTEM INFO) icon, you will see a similar screen as the following:

SYSTEM INFO		
	SERIAL TYPE	RS485
	BAUD RATE	2400
	HOST ID	0
	PASSWORD	XXXX
	RESET DEFAULT	RESET
	CLEAR HDD	HDD-EXT-252
	UPGRADE	START
	AUTO KEYLOCK (SEC)	NEVER
	LANGUAGE	ENGLISH
	VIDEO FORMAT	PAL
	VERSION	1006-1005-1001-1005-(null)-0000

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) SERIAL TYPE

Here shows the serial type of the DVR (RS-485).

2) BAUD RATE

Set the baud rate of the DVR (2400 / 9600 / 19200 / 38400 / 57600).

3) HOST ID

Set the ID of the DVR (0 ~ 254).

4) PASSWORD

Reset the password for accessing the DVR system. You can set the password up to 4 digits.

5) RESET DEFAULT

Press the “ENTER” button to reset all settings as default, and select “YES” to confirm or “NO” to cancel.

6) CLEAR HDD

Select the HDD. Press the “ENTER” button and select “YES” to confirm to clear HDD or “NO” to cancel.

7) UPGRADE (For upgrading firmware / OSD)

Before using the USB flash drive, please use your PC to format the USB flash drive to FAT32 format first.
Save the upgrade file in a compatible USB flash drive, and insert it into the USB port at the front panel.
Then, press the “ENTER” button and select “YES” to confirm upgrade or “NO” to cancel.

Note: For the list of compatible USB flash drives, please refer to “APPENDIX 2 RECORDING TIME TABLE” at page 75.

---

8) R.E.T.R. (MIN)

- **R.E.T.R. Activation**
  Press “MENU” + “－” buttons on the front panel to enable R.E.T.R. function 3 / 5 / 10 minutes later. A message “R.E.T.R. ON” will be shown on the screen (in white text), and after the RETR function is activated, the message “R.E.T.R.” shown on the screen will turn to red.
- **R.E.T.R. Off**
- Press any key (except “SHIFT” and “POWER” buttons) and enter the password to turn off the RETR function.

9) AUTO KEYLOCK

Set the time-out in second after which the key lock function is activated (Never / 10 / 30 / 60).

10) LANGUAGE (Multilingual OSD)

Select the language of the OSD.

11) VIDEO FORMAT

Here shows the information of the DVR video format (NTSC / PAL).

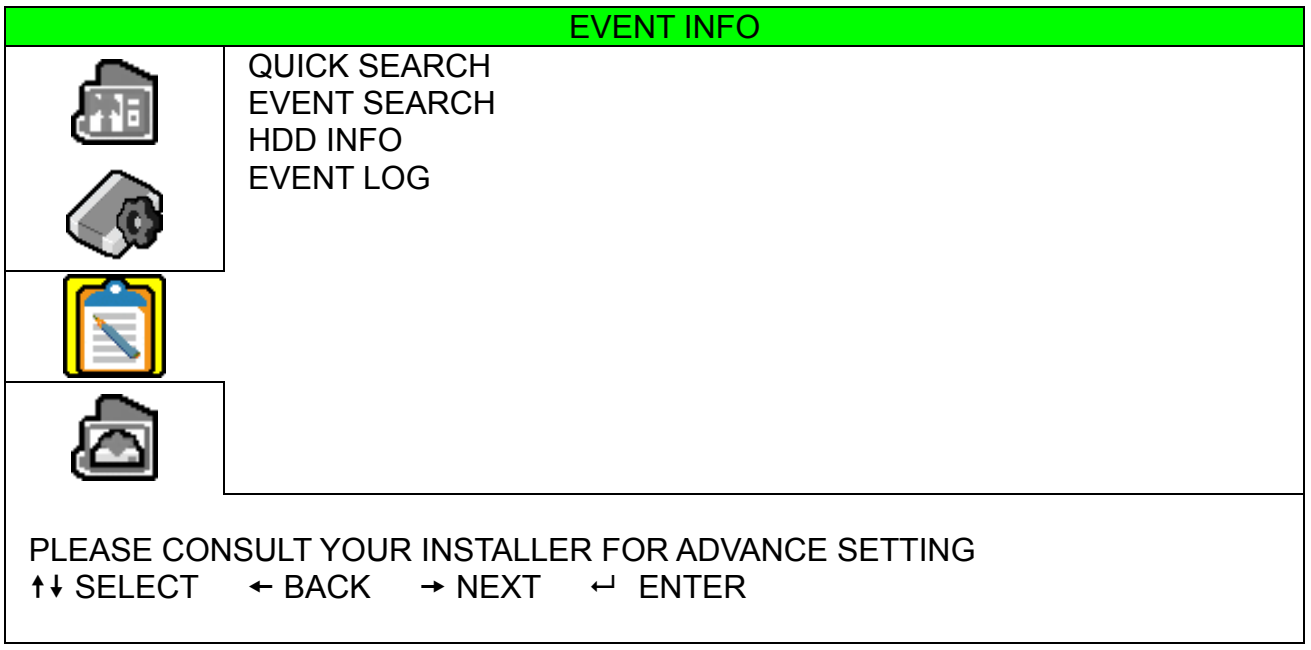
12) VERSION

Here shows the firmware version information

7.3 Event Info

In this menu list, you can quickly search the recorded file by time and view all the HDD and event information (event type, time and channel).

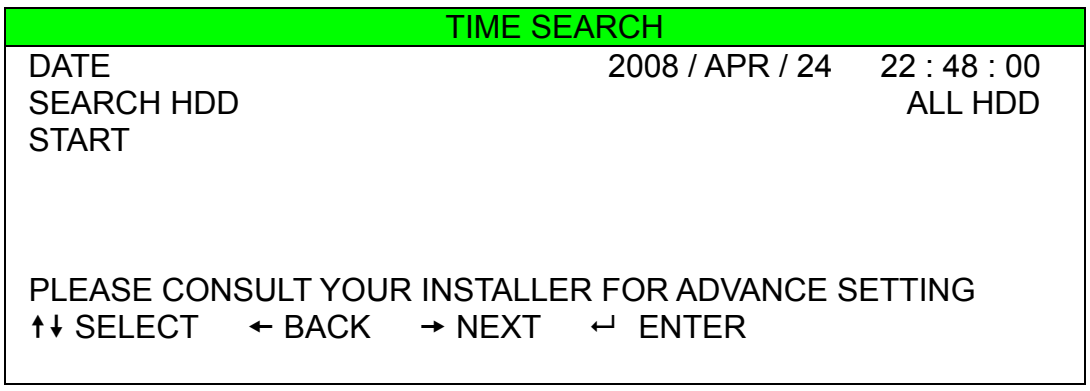
Move the cursor to “ ” (EVENT INFO) icon, and press the “ENTER” button. You will the following screen:



7.3.1 Quick Search

In this menu list, you can search any specific events by time and directly play the file you find.

Move the cursor to “QUICK SEARCH”, and press the “ENTER” button. You will see a similar screen as the following:


TIME SEARCH
DATE 2008 / APR / 24 22 : 48 : 00
SEARCH HDD ALL HDD
START
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described below:

1) DATE

Select the specific time period (YEAR / MONTH / DAY / HOUR / MIN) that you want to search.

2) SEARCH HDD

Change to the HDD you want if there are more than 1 HDD in your DVR.

3) START

Move the cursor to “START” and press the “ENTER” button to search and directly playback the recorded files.

7.3.2 Event Search

Move the cursor to “EVENT SEARCH”, and press the “ENTER” button. You will see the following screen:

EVENT SEARCH		
DATE	2008 / JUN / 17	22 : 48 : 00
CHANNEL		01
EVENT		MOTION
SEARCH HDD		ALL HDD
START		
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING		
↑↓ SELECT ← BACK → NEXT ↵ ENTER		

The submenu items are described below:

1) DATE

Set the date and time you want to search for events.

2) CHANNEL

Press “＋”or “－” to select the channel.

3) EVENT

Select the event type: MOTION or ALARM.

4) SEARCH

You can choose to search only the selected HDD (SELECTED) or all the connected HDDs (ALL HDD) by pressing “＋”or “－”.

After setting all search criteria, press “ENTER” to start search and directly play if any file is found.

Note: The file found will be played with the fast speed.

7.3.3 HDD Info

In this menu list, you can view the remaining capacity of all the connected HDDs in this device.

Move the cursor to “HDD INFO”, and press the “ENTER” button. You will see a similar screen as the following:

HDD INFO			
HDD NUM	HDD SIZE (GB)	HDD NUM	HDD SIZE (GB)
HDD–MASTER–1	233	HDD–SLAVE–1	NO HDD
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING			
↑↓ SELECT ← BACK → NEXT ↵ ENTER			

7.3.4 Event Log

In this menu list, you can view all the event information (event type, time and channel) or clear all log records. Move the cursor to “EVENT LOG”, and press the “ENTER” button. You will see a similar screen as the following:

EVENT LOG

EVENT	TIME		COMMENT
NET LOGIN	2008 / APR / 24	10:36:50	
NET LOGIN	2008 / APR / 24	10:33:12	
NET LOGIN	2008 / APR / 24	10:28:15	
KEY UNLOCK	2008 / APR / 24	10:27:14	
VLOSS	2008 / APR / 24	10:23:34	04
VLOSS	2008 / APR / 24	10:23:34	03
VLOSS	2008 / APR / 24	10:23:34	02
VLOSS	2008 / APR / 24	10:23:34	01
POWER ON	2008 / APR / 24	10:23:30	
KEY UNLOCK	2008 / APR / 23	14:37:30	

PREV NEXT CLEAN

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

7.4 Backup

In this menu list, you can choose to make a copy for a specified period time to a compatible USB flash drive for your own purpose.

The backup file can be played directly in your PC via the supplied licensed software AP or IE browser. For detailed AP playback, please refer to the section “Playback Screen” at page 65

Move the cursor to “ ” (BACKUP), and press the “ENTER” button. You will the following screen:

BACKUP

USB BACKUP
DISK BACKUP

PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

7.4.1 USB BACKUP

Before making USB backup, please check if:

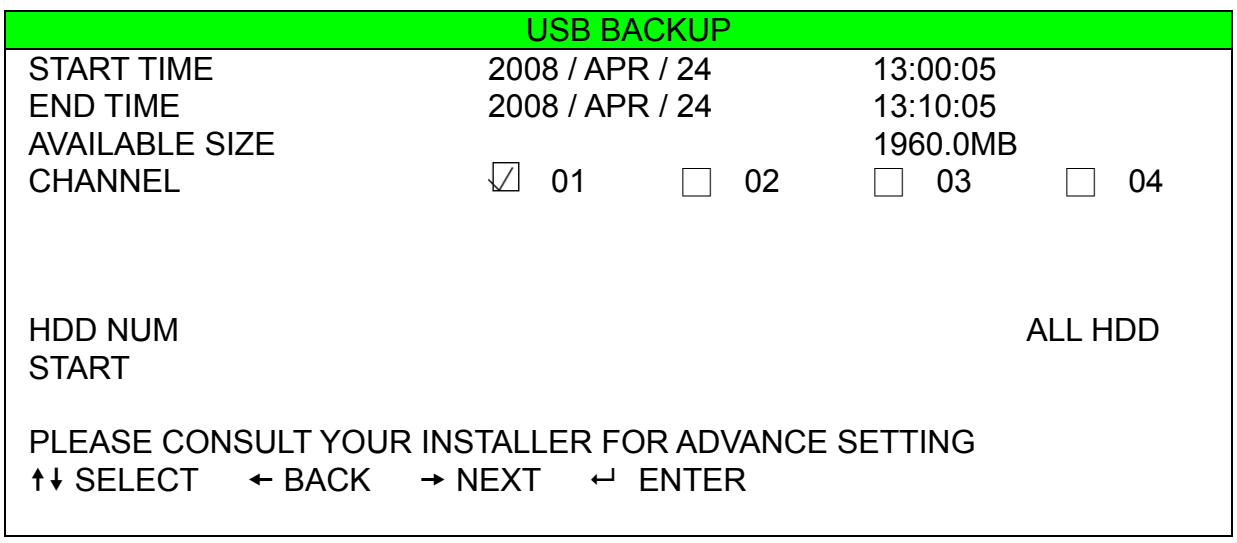
a) The USB flash drive is supported by your DVR. If not, the message “USB ERROR” will be shown on the screen.
For the list of the compatible USB flash drives, please refer to “APPENDIX 2 RECORDING TIME TABLE” at page 75.

b) The format of your USB flash drive must be "FAT 32". If not, please format it to “FAT 32” in your PC.

c) There is no data in the USB flash drive. If yes, it’s recommended to clear all data in the USB flash drive before starting the backup.

Note: When USB backup starts, it’s not allowed for OSD menu operation or network backup in order to keep the consistency of the video data.

Move the cursor to “USB BACKUP”, and press the “ENTER” button. You will see a similar screen as the following:


USB BACKUP
START TIME 2008 / APR / 24 13:00:05
END TIME 2008 / APR / 24 13:10:05
AVAILABLE SIZE 1960.0MB
CHANNEL ☑ 01 ☐ 02 ☐ 03 ☐ 04
HDD NUM ALL HDD
START
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTING
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items are described as below:

1) START TIME

Select the start time of the backup.

2) END TIME

Select the end time of the backup.

3) AVAILABLE SIZE

Display the available capacity in the inserted USB flash drive.

4) CHANNEL

Select channels by pressing the “ENTER” button to change the symbol in front of the channel number.
Symbol “ ☑ ” means that this channel is selected to backup.
Symbol “ ☐ ” means that this channel is not selected to backup.

5) HDD NUM

Press the “ENTER” button to select the HDD containing the data you need.

6) START

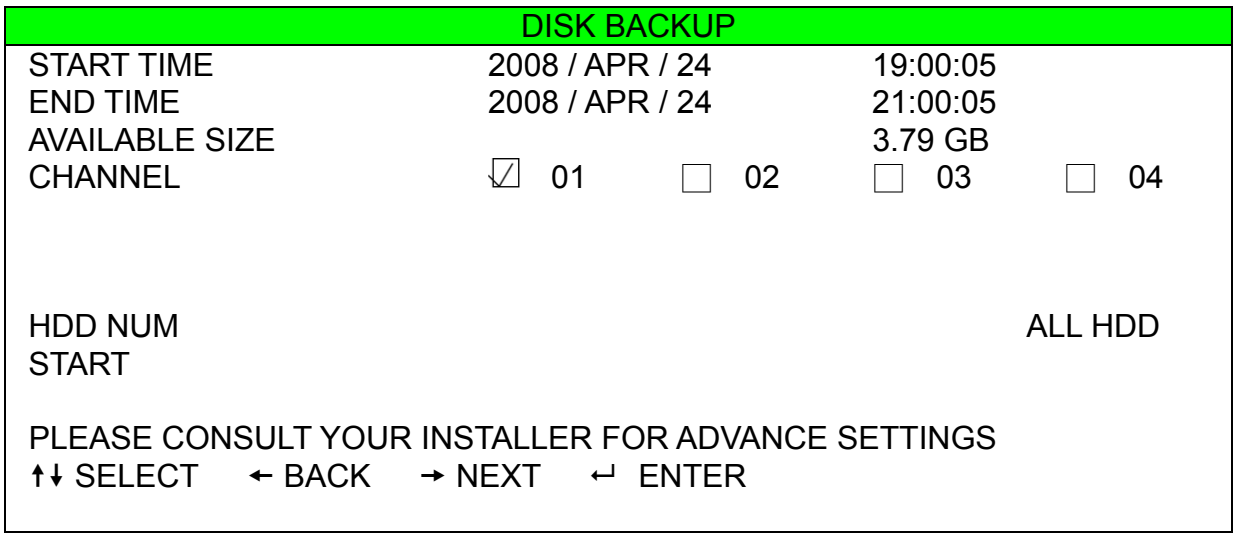
Press the “ENTER” button to start copying the chosen data to the USB flash drive.

7.4.2 DISK BACKUP (Optional)

Before making disk backup, please check if the type of your DVD is DVD-R. The maximum number of backup files in the CD or DVD is 41.

Note: During the backup process, a file player will also be copied into your disk, and you will see a message “BACKUP PLAYER” shown on the screen.

Move the cursor to “DISK BACKUP”, and press “ENTER” button. You will see a similar screen as the following:


DISK BACKUP
START TIME 2008 / APR / 24 19:00:05
END TIME 2008 / APR / 24 21:00:05
AVAILABLE SIZE 3.79 GB
CHANNEL ☑ 01 ☐ 02 ☐ 03 ☐ 04
HDD NUM ALL HDD
START
PLEASE CONSULT YOUR INSTALLER FOR ADVANCE SETTINGS
↑↓ SELECT ← BACK → NEXT ↵ ENTER

The submenu items and their functions are almost the same as USB BACKUP. For the description of the submenu items, please refer to the previous page.

The process below describes how to make a disk backup:

a) Press “EJECT” button to open the disk tray. Put the DVD into a DVR writer, and press “EJECT” button again to close the disk tray..

b) Go to “DISK BACKUP” menu, and set the start time, end time, channels and HDD.

c) Move the cursor to “START”, and press “ENTER” to start backup.
While DVD backup is processing, users will see the backup completed percentage on the screen.

d) After DVD backup is completed, “DISK BURN FINISH” will be prompted on the screen. Press “EJECT” button to eject the DVD tray and get the DVD.

e) Put the DVD into the DVD-ROM drive of your PC. Double click the file to convert it into “VSE” format. Play the converted file in your PC to see if the backup is successful.

Note: The supported PC operation systems are Windows 2000 and Windows XP**.**

8. REMOTE OPERATION

You can also control the DVR remotely via the supplied licensed software AP (hereafter called the “AP”), IE web browser, and Apple’s QuickTime player.

8.1 Supplied Licensed Software AP

8.1.1 Installation & Network Connection

1) Install the software

Place the supplied CD-ROM into your DVD- / CD-ROM drive. The installation process will automatically start. Follow the on-screen instructions to install the application programs.

After installation, a shortcut icon “ ” will be shown on your PC desktop.

2) Network Connection

- Local Connection (via LAN)

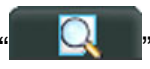
f) Connect the DVR to your PC via a RJ-45 network line. The default DVR IP address is “192.168.1.10”, and the default user name and password are both “admin”.

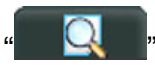
g) Set the PC’s IP address as “**192.168.1.*XXX*** ” (1~255, except 10) in order to make the PC and DVR under the same domain.

h) Double-click “ ” icon on your PC desktop to enter the AP control panel. By defaults, the “Address Book” ( ) panel will be displayed on the right side of the AP control panel.

i) Click “ ” (Address Book) → “ ” (Add) button to key in the default IP address, user name, password, and port number of the DVR you intend to connect.

OR

Click “  ” (Search) → “ ” (Refresh) to search the available IP address(es) of other DVR(s) under the same domain as your PC’s IP address. The found address(es) will be listed, and can be added into the address book by clicking “ ” (Add into address book).

For details, please see “  ” (Search) at page 41.

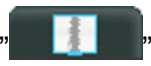
j) Double-click the IP address you just added into the address book to log in. When you’re logged in, the “Event” panel will be shown by defaults.

The default DVR values are as follows:

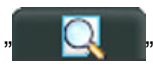
Item	**Default Value**
IP address	192.168.1.10
User name	admin
Password	admin
Port	80

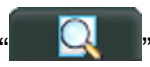
- Remote Connection (via Internet)

k) Double-click “ ” icon on your PC desktop to enter the AP control panel. By defaults, the “Address Book” panel will be displayed on the right side of the AP control panel.

l) Click "  " (Address Book) → " " (Add) button to key in the IP address, user name, password, and port number of the DVR you intend to connect.

OR

Click "  " (Search) → " " (Refresh) to search the available IP address(es) of other DVR(s) under the same domain as your PC's IP address. The found address(es) will be listed, and can be added into the address book by clicking " " (Add into address book).

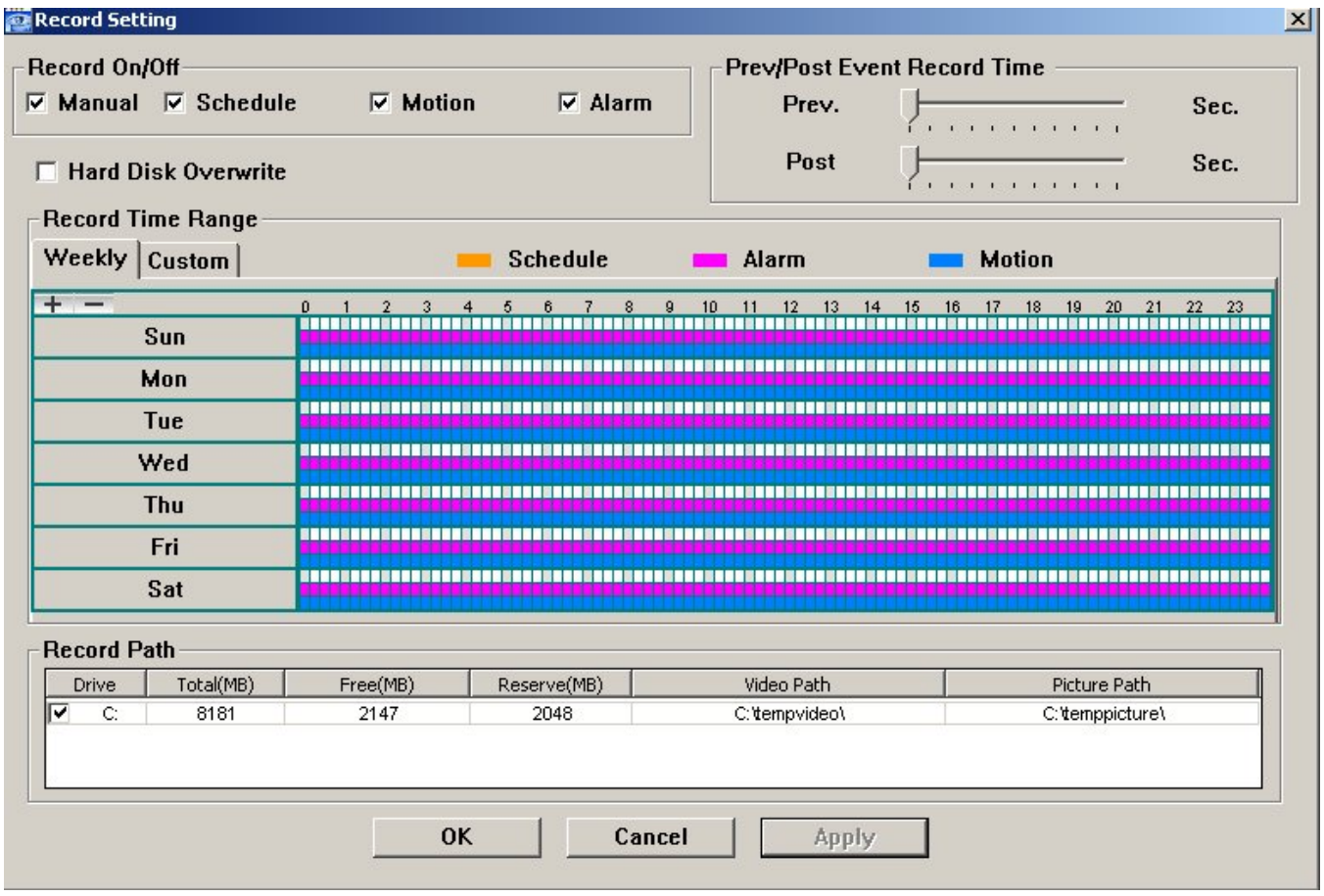
For details, please see "  " (Search) at page 41.

m) Double-click the IP address you just added into the address book to log in. When you're logged in, the "Event" panel will be shown by defaults.

8.1.2 General AP Operation

Record

To record remotely at the same time when any event alarm is triggered at the DVR side, click " " (Miscellaneous Control) → " " (Record Setting) to go to the "Record Setting" page.



In the "Record Setting" page, you can set the following items:

- Record type
- Hard disk overwriting
- Pre- / post-alarm record time
- Record time setting
- Record path

If “Manual” is checked, click “ ” (Record) on the main control panel to start the manual recording immediately, and the recordings will be saved in the specified location. The red text indication “REC” will be shown at the top left corner of the image display view.

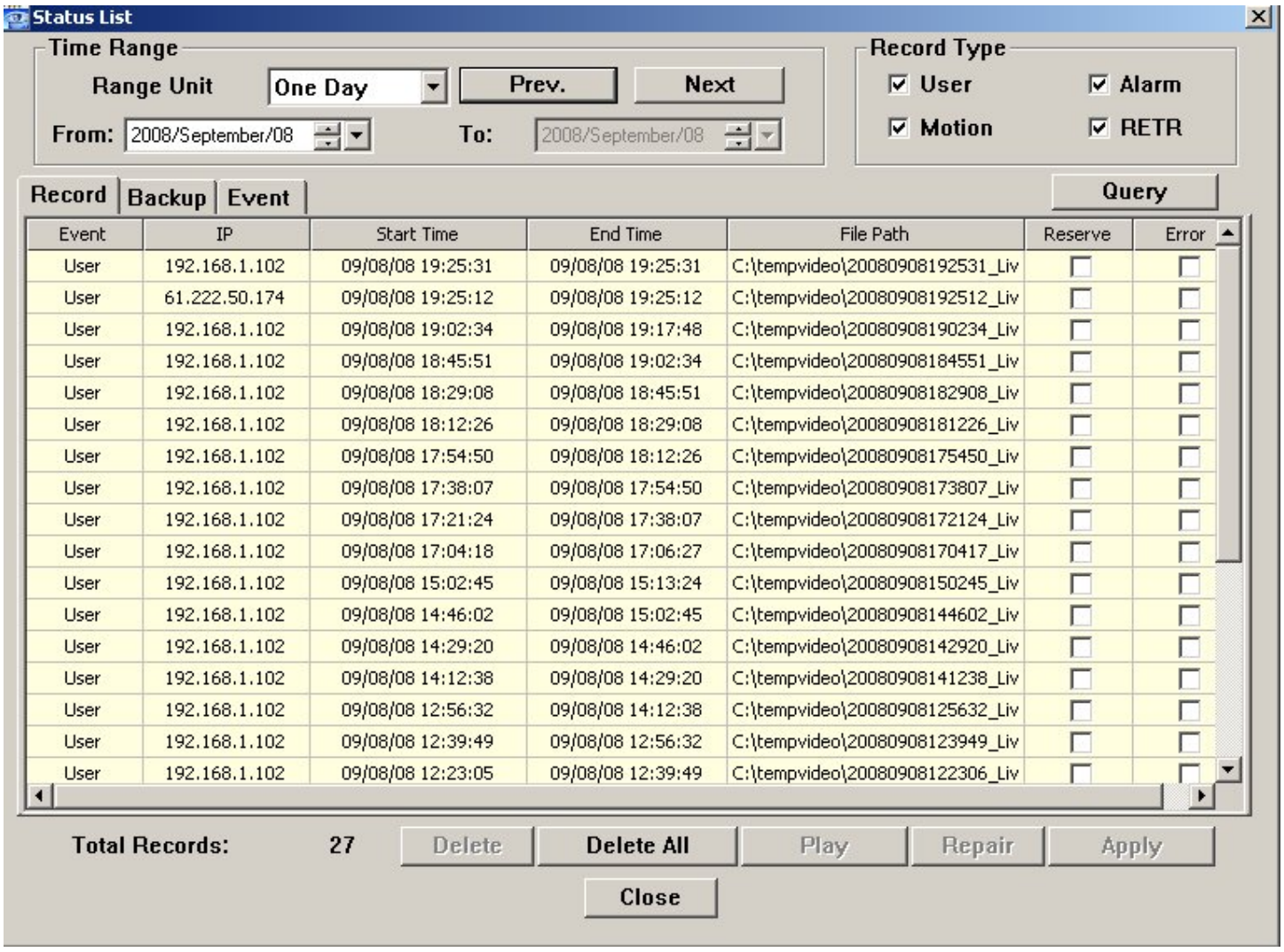
If “Motion” and / or “Alarm” are checked, the recording function will also be enabled at the remote side when any event is triggered at the DVR side, and the recordings will be saved in the specified location.

For details, please see “Record Setting” at page 43.

Playback

To play a recording, click “ ” (Miscellaneous Control) → “ ” (Status List), and select the “Record” tab or “Backup” tab. A list of all the recordings will be shown by defaults, and you can also sort out the logs you want to speed up the search time.

For details, please see “Status List” at page 62.

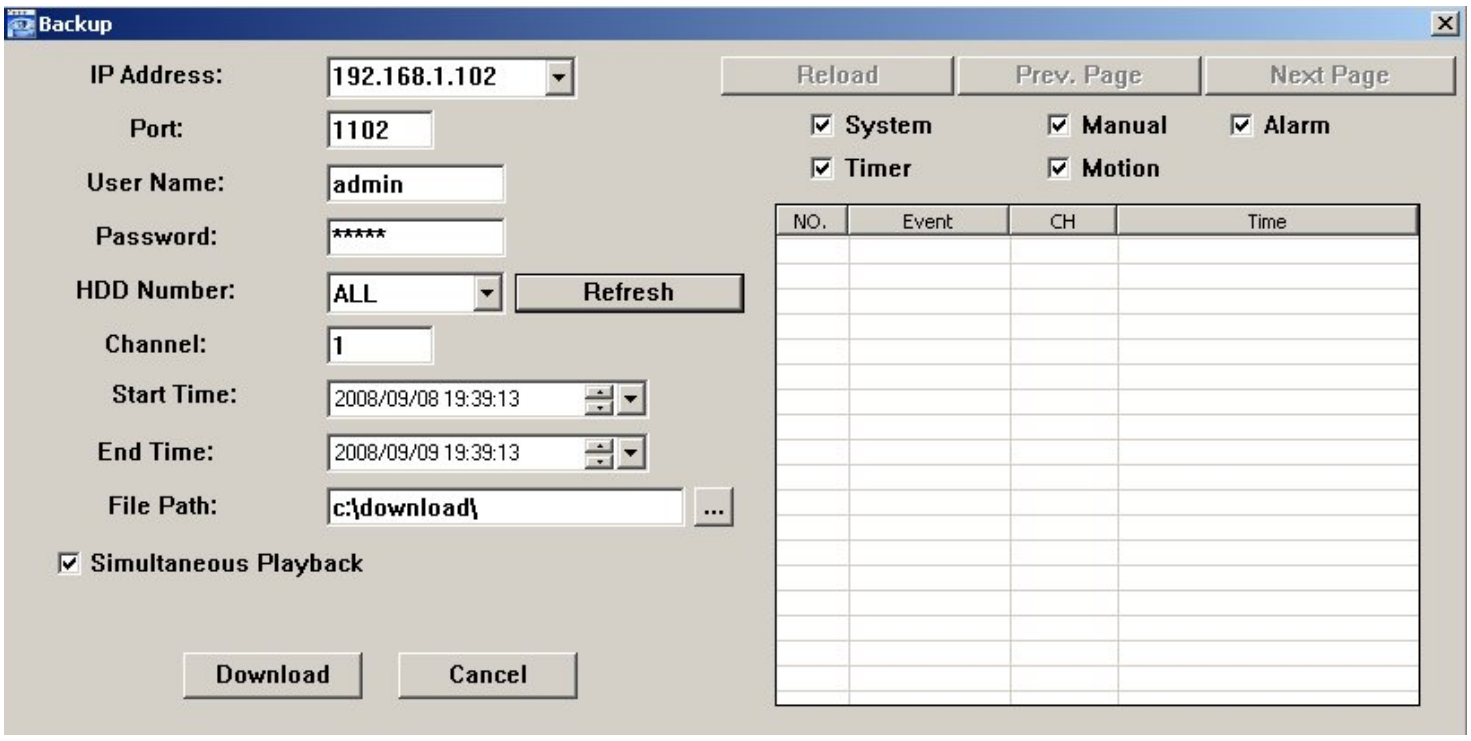


To immediately play a recording, select a log from the list, and click “Play” button, or double-click the selected log. Then, the playback control panel will be shown at the bottom of the main control panel similar to the following.

For the playback control panel details, please see “Playback Screen” at page 65.

Network Backup

Click “ ” (Miscellaneous Control) → “ ” (Backup) to go into the “Download” page as follows, and you can select a specific time range or event to make a video backup remotely. For details, please see “Backup” at page 42.



8.1.3 AP Control Panel

After setting up the network information, login user name and password, double-click " " on the PC desktop to open and log into the AP control panel. You will see a screen similar to the following with 7 major sections:

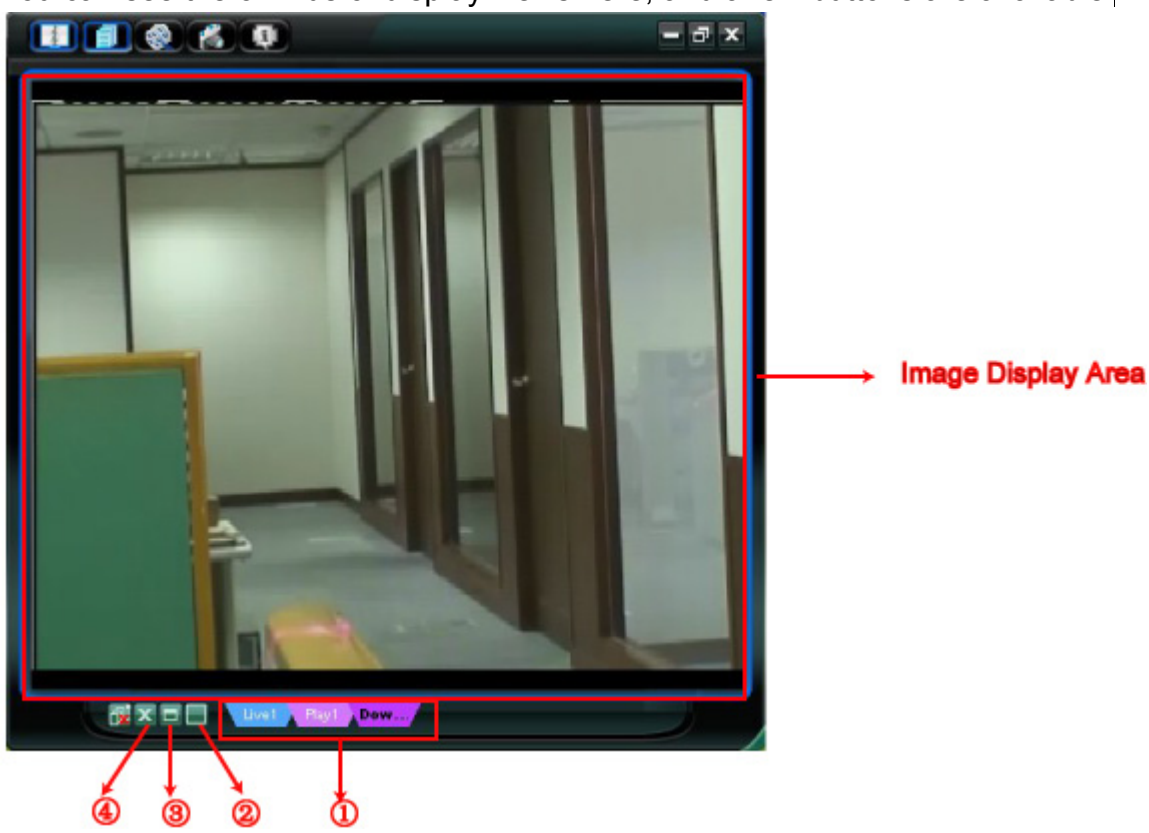
①	Image Display
②	Address Book
③	Miscellaneous Control
④	Record
⑤	Snapshot
⑥	Information
⑦	DVR Control

NO.	Button	Function	Description
①	N/A	Image Display	The place where the images are displayed. For details, please see "Image Display" at page 39.
②		Address Book	Click this button to show the predefined IP address(es). You can add, remove or search the IP address to log in the DVR remotely. Two sub-functions are available for this button: Address Book and Search. For details, please see "Address Book " at page 39.
③		Miscellaneous Control	Click to show the main operation functions: audio channel selection, manual record enabling, snapshot, record setting, DVR setting, upgrade firmware, and find event logs. For details, please see "Miscellaneous Control " at page 41.
④	/	Record/Stop Recording	Click it to start / stop video recording manually.
⑤		Snapshot	Click to take a snapshot of the current view. The snapshot will be saved in the path you specified in "Record Setting". Please refer to "Record Setting" at page 43 for details.
⑥		Information	Click this button to show the current network connection details. For details, please see "Information " at page 66.
⑦		DVR Control	Click this button to go to the DVR control panel to operate the DVR remotely. For details, please see "DVR Control" at page 67.

8.1.4 AP Functions

Image Display

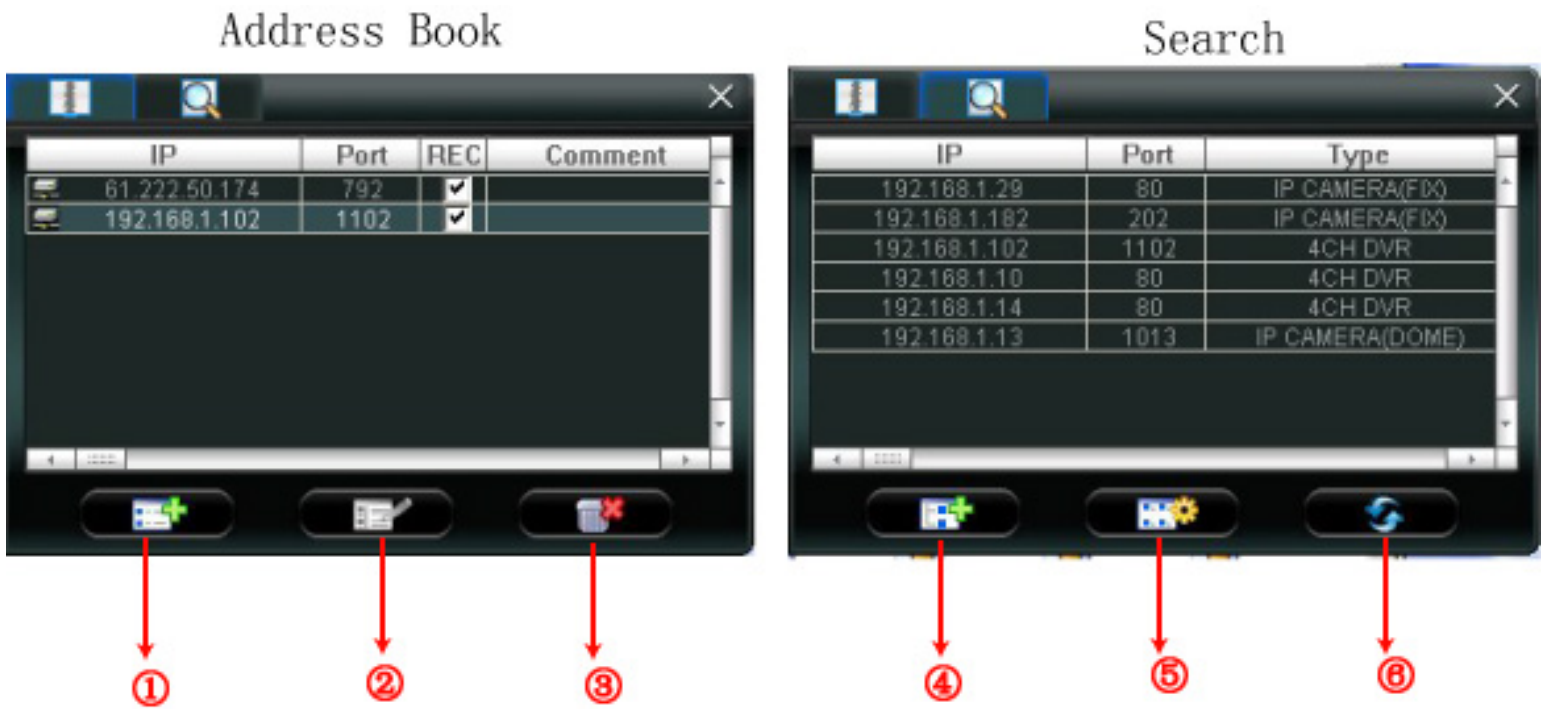
You can see the 3 kinds of display views here, and a few buttons are available.



NO.	Button	Function	Description
①		Live / Playback / Download Display Switch	If you want to switch among the live view, playback view and download view, click the blue tab “Live1”, “Play1” or “Download” to make a switch. **Live1**: When you are logged in, this tab with the live view is displayed by defaults. **Play1**: When a video clip is selected in “Logs” and played, this tab with the palyback view is displayed. **Download**: When the downloaded video clip is selected in “Logs” and played, this tab with the downloaded video clip is displayed.
②		Expand All Views	To see all views in the image display area if you have many views and do not want to switch each view by clicking the blue tab described above, click to choose a proper split view (1-cut / 4-cut / 9-cut / 16-cut) which best suits your needs. The selected view will be indicated with a red frame around it.
③		Full Screen	Click to view the images in the full screen mode. To exit the full screen mode, click “Esc” key on the keyboard.
④		Close	Click to close the current image display view. If the last image display view is closed, you will be logged out automatically.

Address Book

This view is displayed when the AP is activated for you to log in / out the DVR from the current address list, or search the available IP address as follows:



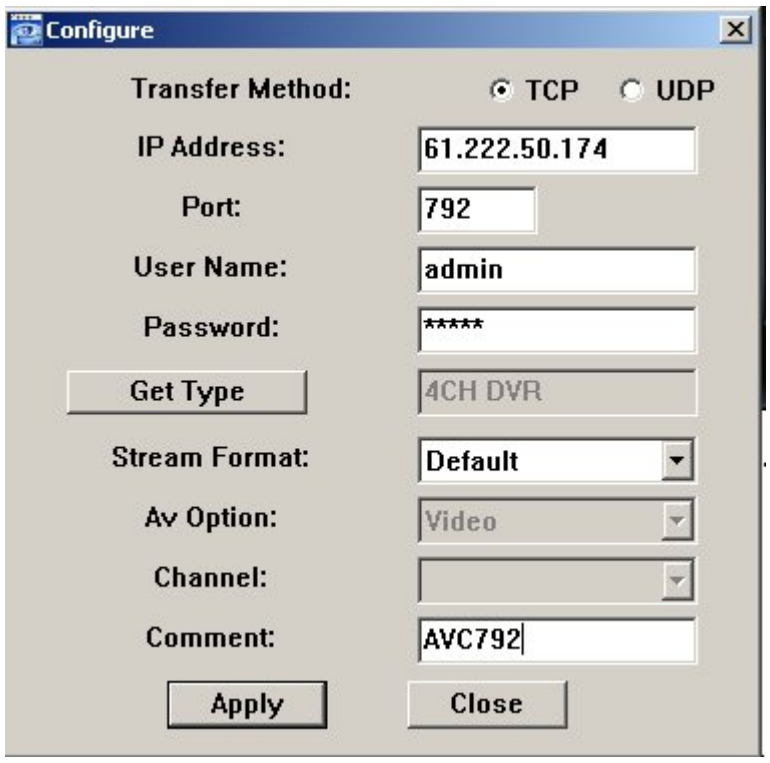
➢ **(Address Book)**

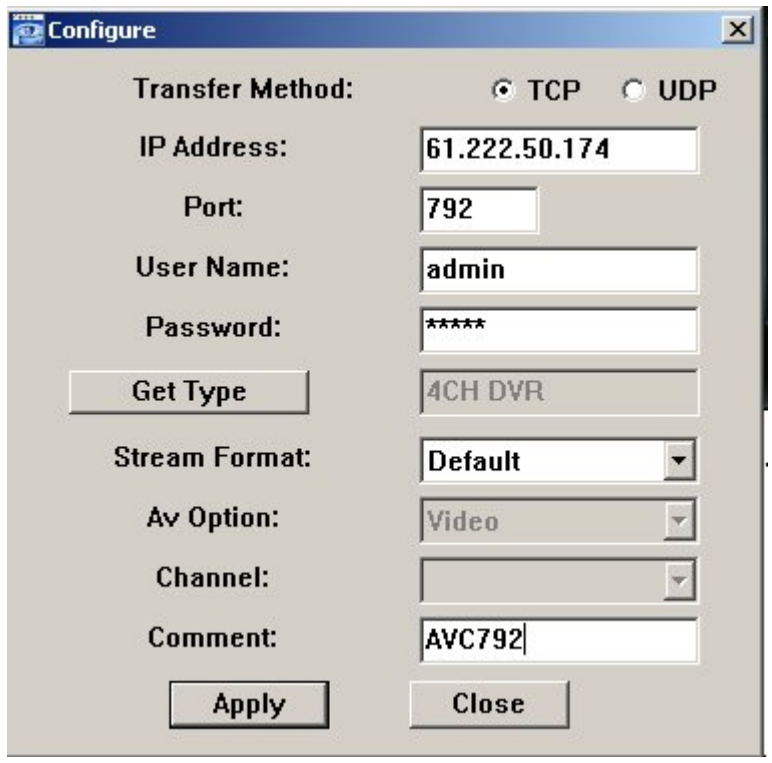
Click to view the pre-defined DVR access details.

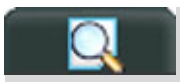
To log in, choose one IP address from the address list, and click the address twice; to log out, click the connected IP address twice.

Tip: You can also click "" or "" in the image display section to log out or log out all. For details, please refer to "Image Display" at page 39.

You can also create new IP address information, or modify or remove the current IP address information.

NO.	Button	Function	Description
1		Add	Click to directly add one IP address for login. Key in the DVR access information needed, and click "Apply" and "Close". 
2		Edit	Select one current IP address from the address list, and click this button to modify the DVR access information as needed.

NO.	Button	Function	Description
			
3		Remove	Select one IP address from the address list, and click this button to delete it.

➢  **(Search)**

Click to search and view the available IP address (es) for the DVR connection. You can choose one address to add into the address book, edit the details, or update the address list.

NO.	Button	Function	Description
4		Add into address book	Select from the available IP address list, and click this button to add the selected address to the address book.
5		Setting	Select from the available IP address list, and click this button to edit the setting.
6		Refresh	Click to update the available IP address list.

Miscellaneous Control

Click " " (Miscellaneous Control) on the AP control panel and 7 functions are available as follows:

Button	Function	Description
	Color Setting	Click this button to adjust the brightness / contrast / hue / saturation for a single channel or the whole channels. For details, please see “Color Setting” at page 42.
	Backup	To make a video backup remotely, click this button, and you will go to the download setting page. For details, please see “Backup” at page 42.
	Record Setting	Click to go to the detailed record setting. Please refer to “Record Setting” at page 43 for details.
	Dvr Setting	Click to go into the detailed DVR setting. Please refer to “Dvr Setting” at page 46 for details.
	Tools	Click to update the firmware version, multilingual OSD and boot display of your DVR remotely. Please refer to “Tools” at page 59 for details.
	Status List	Click to view all event and recording logs, search the desired log(s) by date, or playback the recording of the selected log. For details, please refer to “Status List” at page 62.

➢ Color Setting

Click “ ” to go into the “Color Setting” page, and you can adjust the brightness / contrast / hue / saturation for a single channel or all channels.

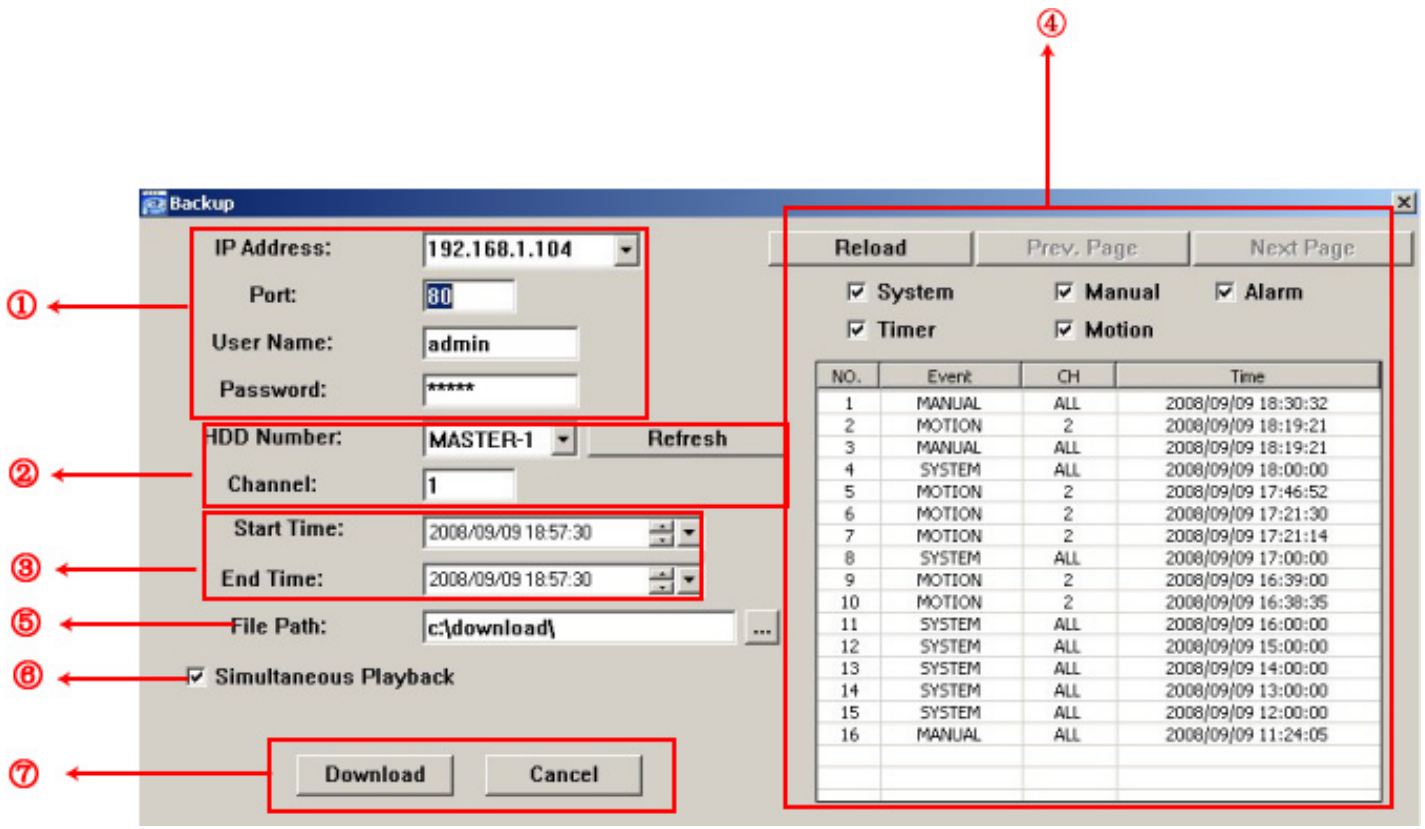
Choose the desired channel from the drop-down list, and click and drag the slider to make adjustment. Click “ ” to apply the change to the selected channel, or “ ” to apply to all channels.

Note: You need to be a supervisor to operate this function. For details, please see “Account” at page 48.

➢ Backup

Click “ ” (Backup) to go into the “Download” page, and you can select a specific time range or event to make a video backup remotely.

Note: You need to be a supervisor to operate this function. For details, please see “Account” at page 48.

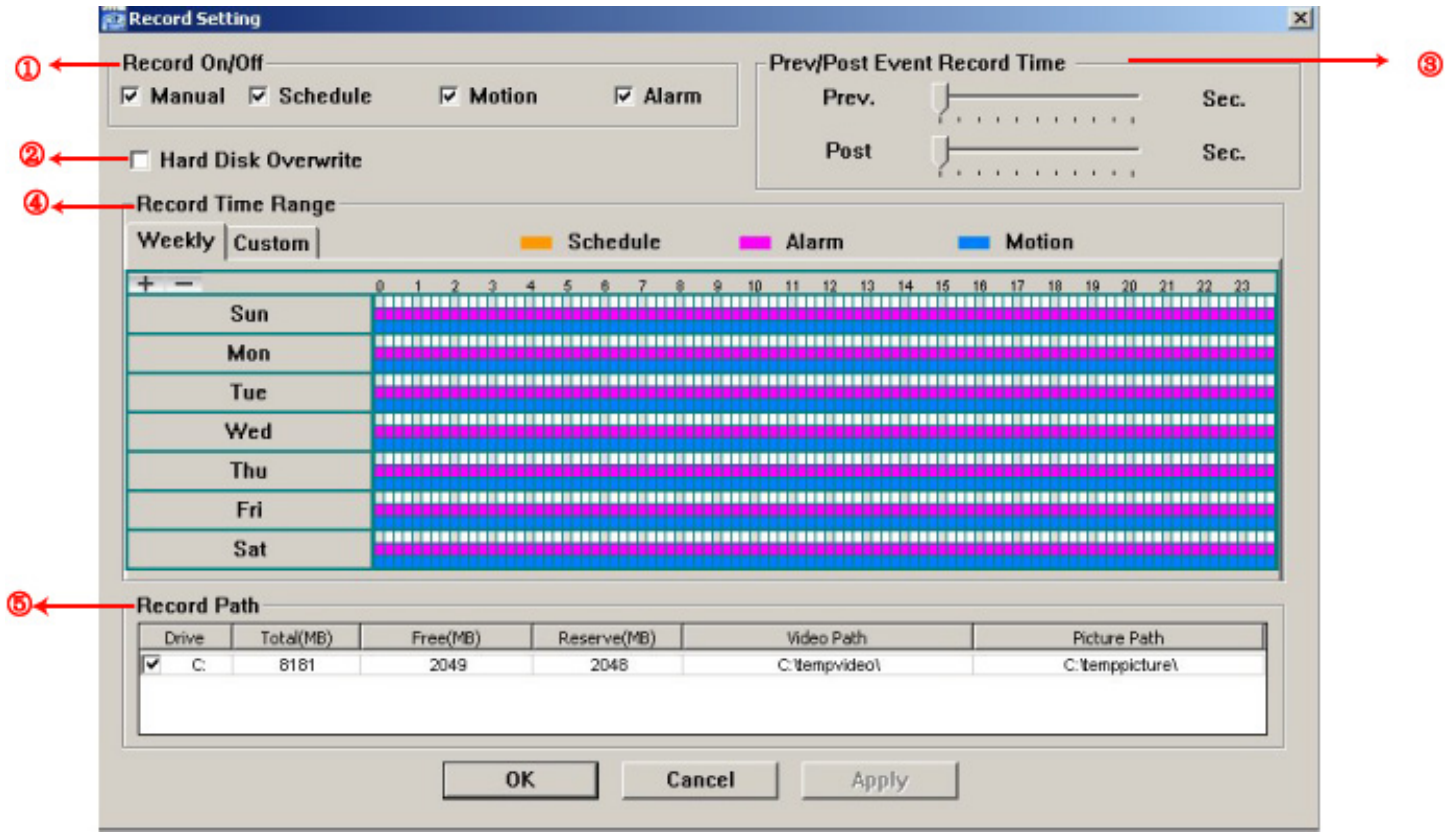


NO.	Function	Description
①	IP Address / Port / User Name / Password	Check if the network connection information of the DVR within which contains the video data you need is correct.
②	HDD Number / Channel	Specify the hard disk (HDD Number) and channel number (Channel) within which have the video data you need.
③	Download by Time	Specify the time range within which has the video data you want in the “Start Time” and “End Time” columns.
④	Download by Event	Select an event log from the event list. This list shows all logs in the specified DVR from the latest to the earliest. • To quickly find the events you need, check or uncheck the event type “System” / “Manual” / “Alarm” / “Motion”, and select the log you want. • To view the earlier or later logs that are not shown in the current page, click “Prev. Page” or “Next Page”. • To refresh the event list, click “Reload”.
⑤	File Path	Assign the location where the backup files are saved.
⑥	Display	To view the backup images simultaneously when the download process is in progress, select the checkbox “Display”. You will see the backup images while the images are being downloaded to the PC or notebook. To simply backup images without previewing, deselect the checkbox “Display”. You will only see a message box indicating the total time needed, the current status and the saving location.
⑦	Download / Cancel	Click “Download” to start or “Cancel” to discard the video backup.

➢ Record Setting

Click “ ” to go into the “Record Setting” page and you can set the following items:

- Record type
- Hard disk overwriting
- Pre- / post-alarm record time
- Record time setting
- Record path



Record type

In this section, you can select which type of the recording will be enabled. There are 4 options: Manual / Schedule / Motion / Alarm.

Hard disk overwriting

To overwrite the recorded data from the earliest to the latest when the hard disk is full, check “Hard Disk Overwrite” checkbox.

Pre- / post-alarm record time

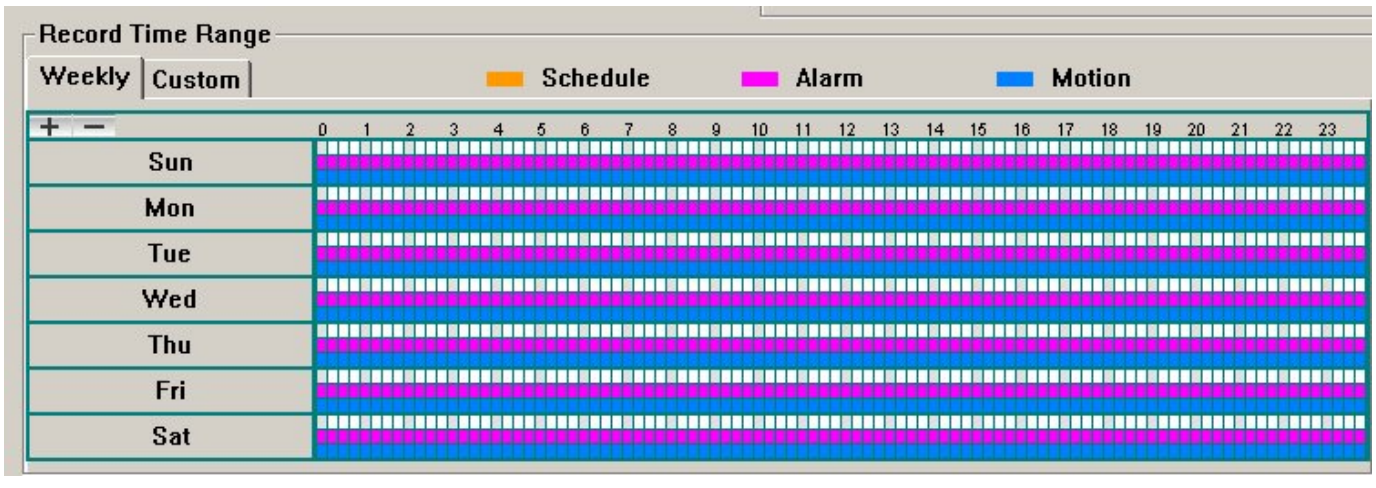
Select the pre-/post-alarm recording time from 0 sec. to 10 sec.

Record time setting

There are two ways to set the record time: Weekly and Custom.

◆ Weekly

Click “Weekly” tab, and you will see a weekly time table indicating the week days (Mon ~ Sun) and hours (0 ~ 24), similar to the figure below:



X axis: 0 ~ 24 hours. Each time interval within a square is 15 minutes.

Y axis: Monday ~ Sunday.

Operation: You can set the record schedule for 3 record types as needed in this time table:

1st timeline – Schedule I recording, indicated in yellow,

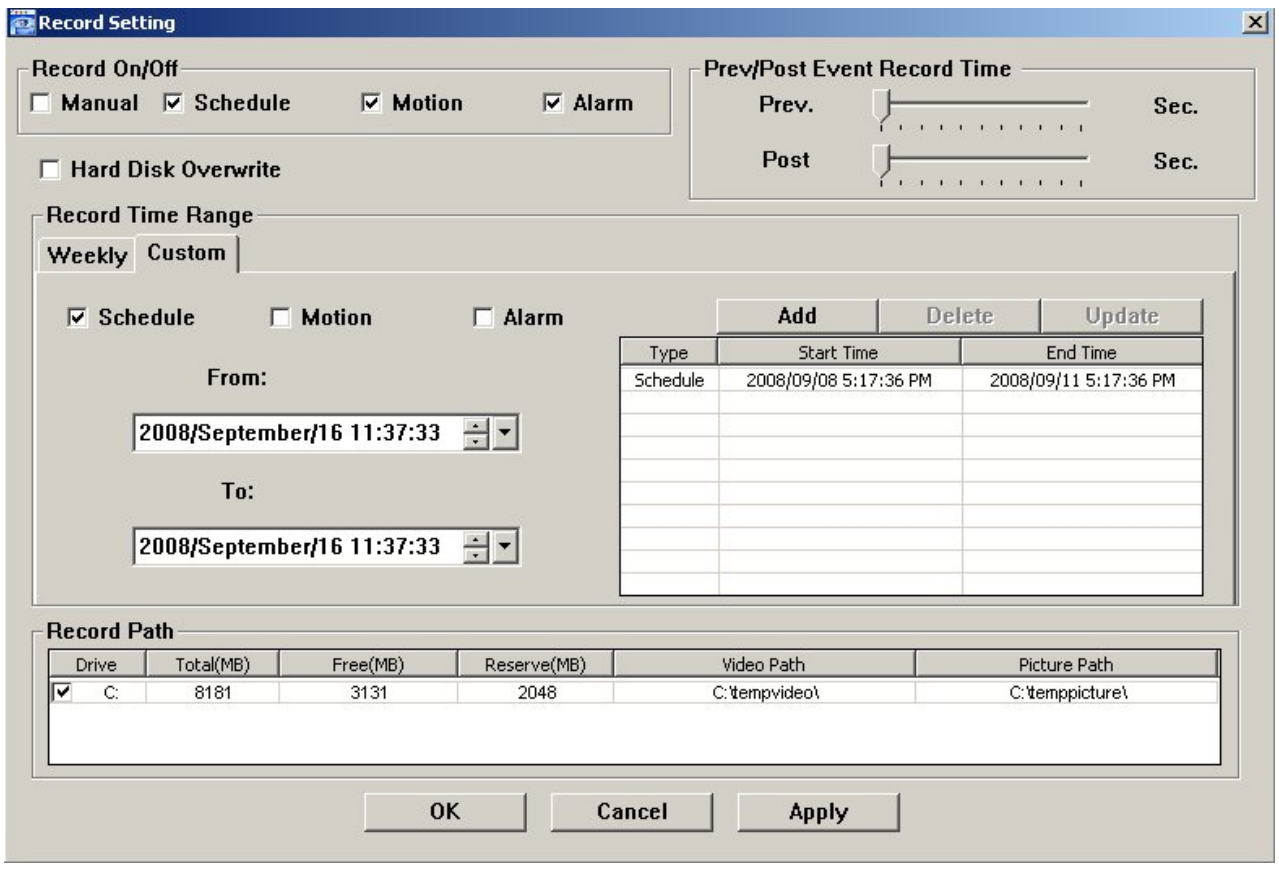
2nd timeline -- Alarm recording, indicated in magenta, and

3rd timeline -- Motion recording, indicated in cyan.

Click and hold the start time point, and drag to the end time point to set the record time range.

◆ Custom

Click “Custom” tab, and you can set a more specific record time range for the 3 record types: Schedule, Motion, and Alarm.

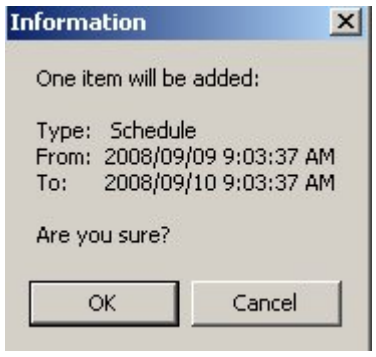


How to add a new time setting:

i. Check the record type you want to schedule the recording.

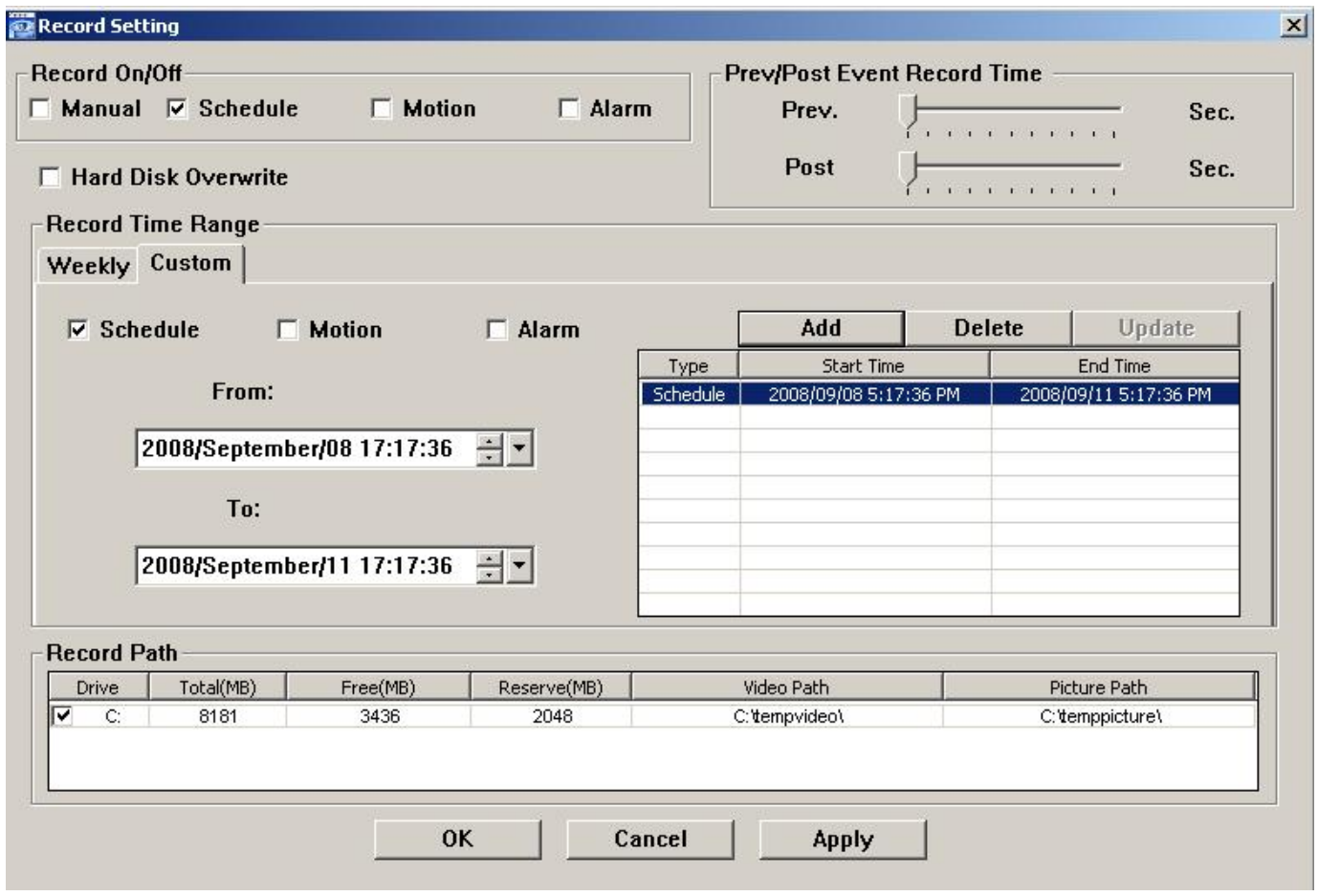
ii. Set the start time (From) and end time (To).

iii. Click “Add” to add the time range you just set into the schedule table. Before adding the time range, you will be prompted to confirm as follow:



iv. Check if the information shown is correct. Click “OK” if the information is correct. Click “Cancel” if the information is wrong.

How to modify / delete a current time setting:



1. Select the schedule setting you want to modify from the schedule table. The setting will be displayed in the left setting panel.
2. Modify the setting in the left setting panel, and click “Update”.
3. You will be prompted to confirm the setting. Click “OK” if the information is correct. Click “Cancel” if the information is wrong.
4. To delete one schedule setting, select it, and click “Delete”.

Record Path

Select and view the location for saving the recorded video and snapshot pictures.

To change the saving path for the recorded video clips or snapshots, check the drive you want, click the cell of “Video Path” or “Picture Path” twice, and select a new path for saving the video clips or snapshots.

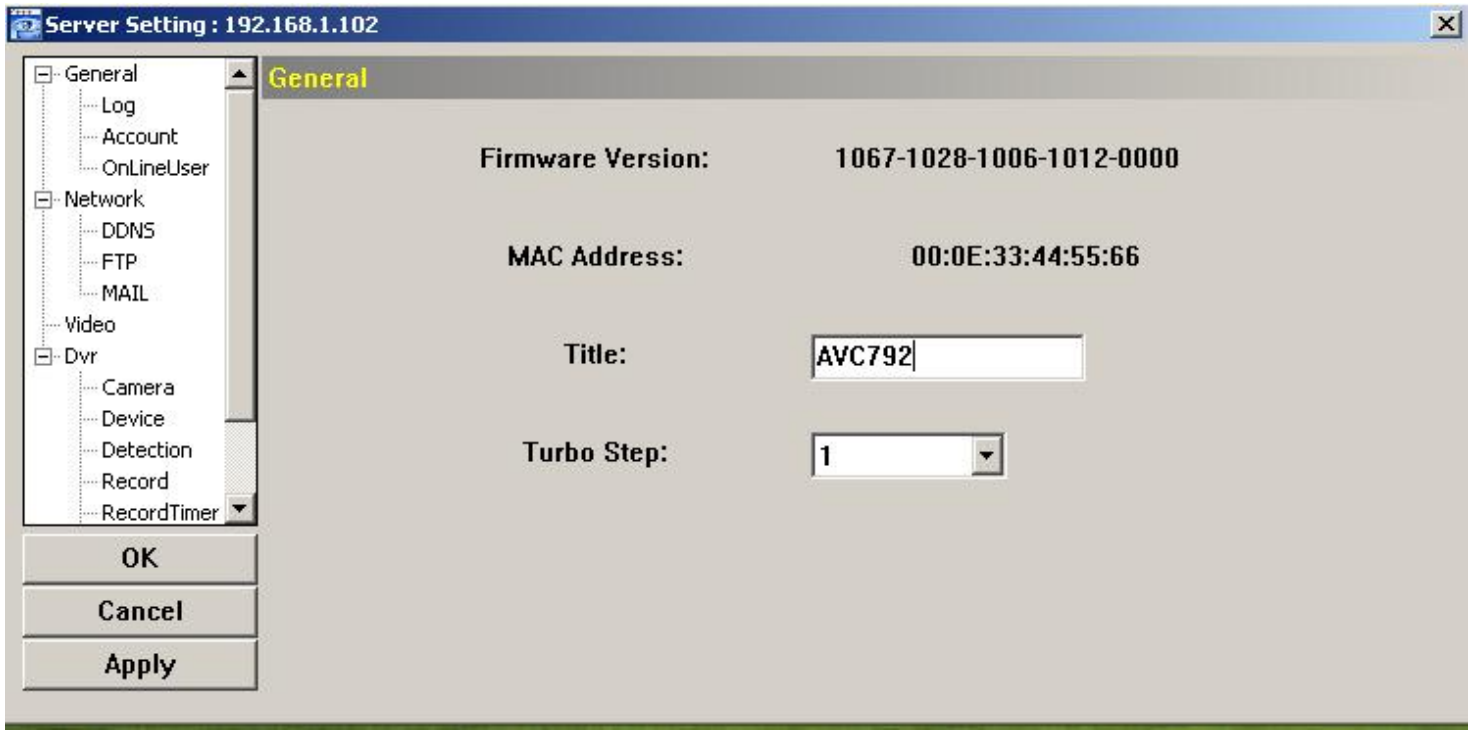
➢ Dvr Setting

Click “ ” to view, set or modify the DVR setting. All the changes you make here will be applied to the connected DVR.

Note: You need to be a supervisor to operate this function. For details, please see “Account” at page 48.

General

In “General” and its sub-menus, “Log”, “Account” and “Online User”, you can view and set some common settings, such as the turbo step, make account setting, and check the information for all current on-line users.

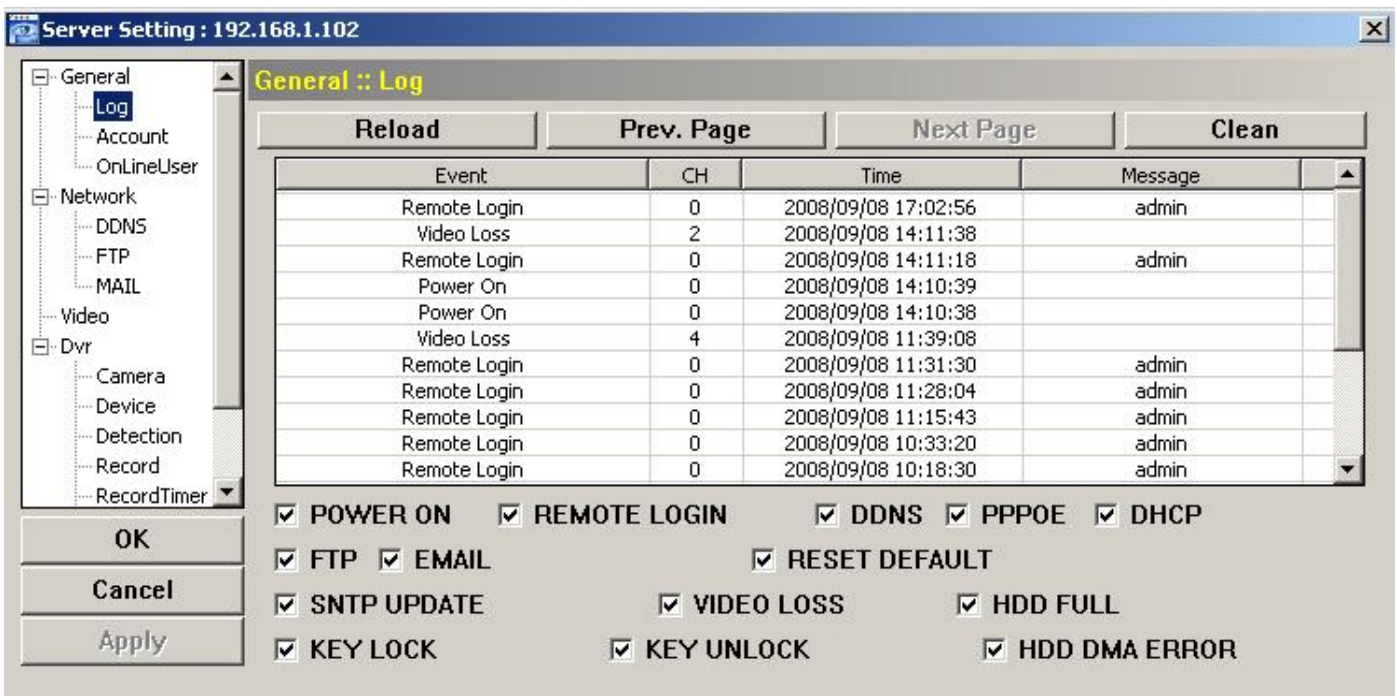


In “General”, you will see the following items:

Item	Description
Firmware Version	Display the current firmware version of your DVR.
MAC Address	Display the MAC address.
Title	Provide a title for this DVR. Only 16 characters are allowed.
Turbo Step	Speed up the menu selection under the AP from 1 to 30. Ex: If the value of the turbo step is set to 5, one mouse-click will function as 5 mouse-clicks when you click one of the buttons / / / in the DVR control panel.

◆ Log

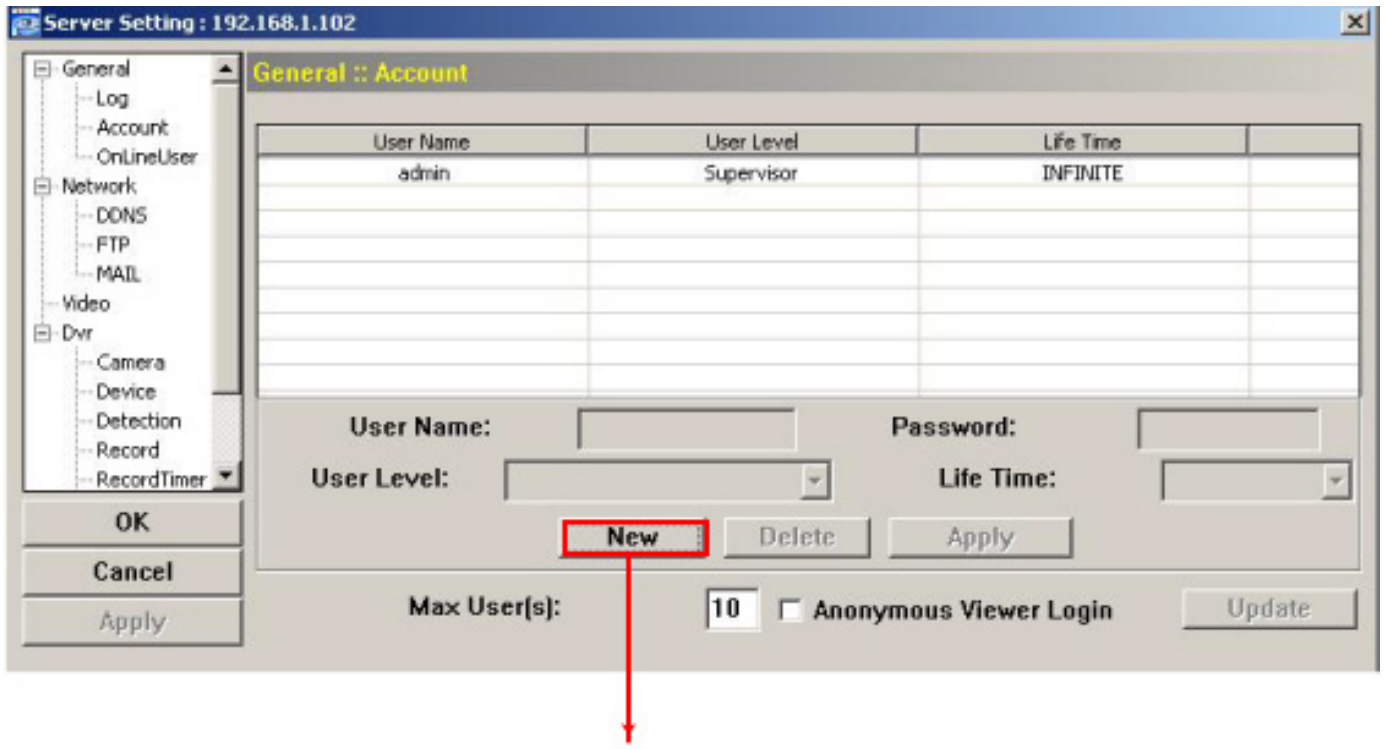
In “General” → “Log”, you can view the system event log(s) of the connected DVR for reference.
To check the previous / next page if there are more than one page, click “Prev. Page” / “Next Page”.
To refresh the event list, click “Reload”; to clear all log(s), click “Clean”.

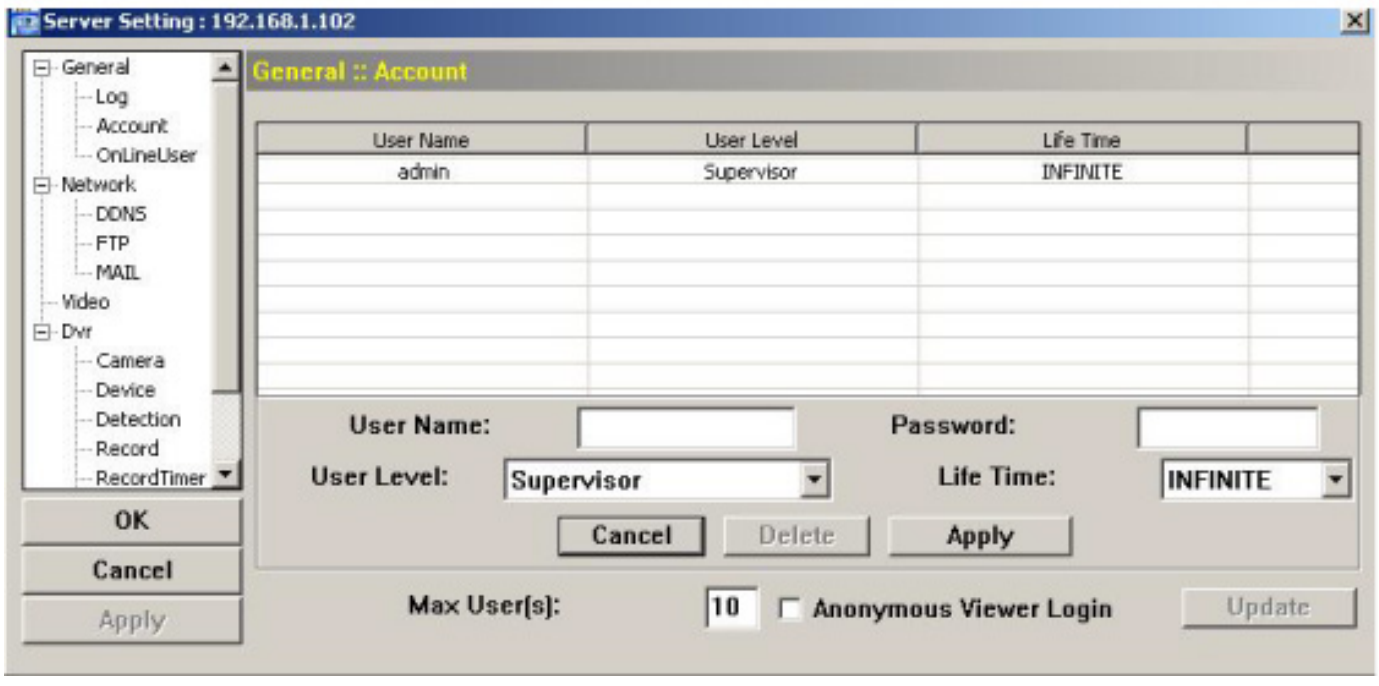


◆ Account

In “General” → “Account”, you can create a new account for login, or delete or modify the existing account setting.

- To add an account, click “Add”, and fill in the following columns. Then, click “Save” to save your setting and create a new account.





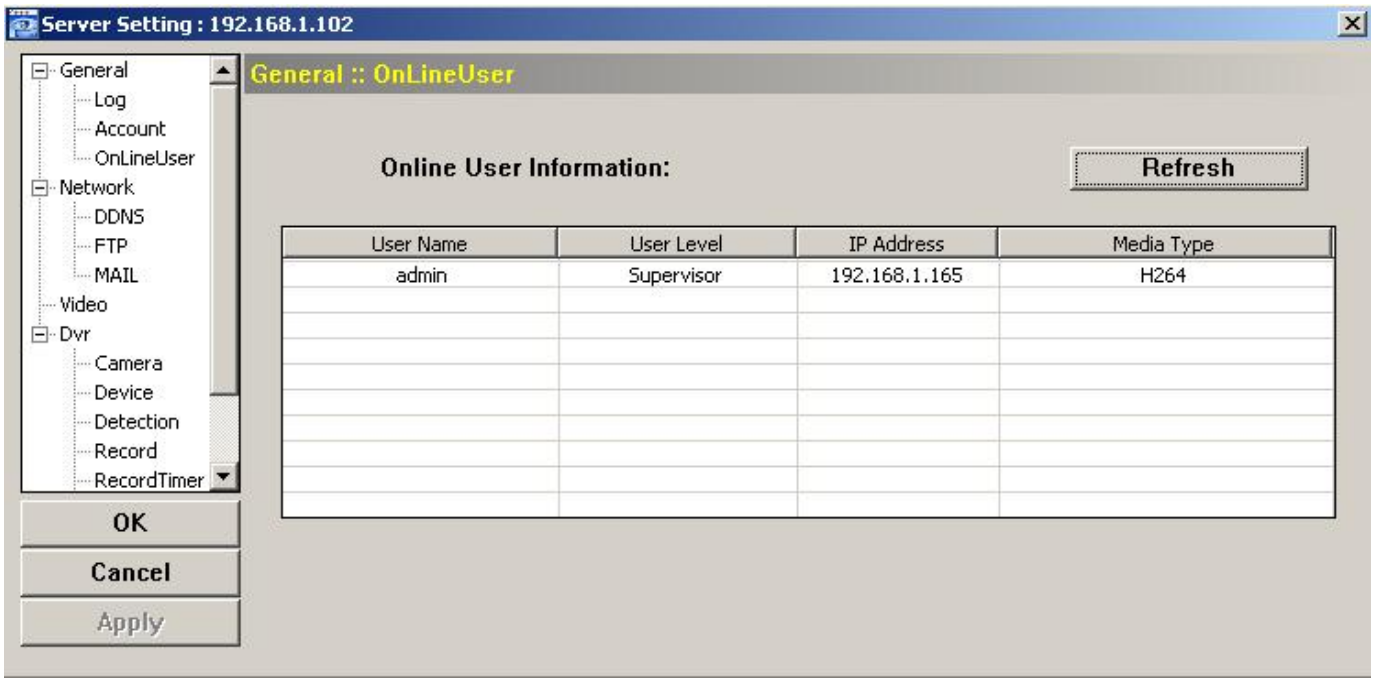
Column	Description
User Name	Set a user name that will be used for remote login. The user name allows up to 16 characters.
Password	Set the password that will be used for remote login. The password allows up to 16 characters.
User Level	Set the security level of an account to give the permission to control different AP functions. There are 4 user levels: Supervisor, Power User, Normal User and Guest. For the functions each level is allowed to use, please see the information below:
Life Time	Select how long this account is allowed to stay online (1 MIN / 5 MIN / 10 MIN / 1 HOUR / 1 DAY / INFINITE)

	Supervisor	Power User	Normal User	Guest
Address Book	●	●	●	●
Miscellaneous Control				
Color Setting	●	X	X	X
Backup	●	X	X	X
Record Setting	●	●	●	●
Dvr Setting	●	X	X	X
Tools	●	X	X	X
Log	●	●	●	●
Record	●	●	●	●
Snapshot	●	●	●	●
Information	●	●	●	●
Dvr Control	●	●	●	X

- To modify an existing account, select the account you want, change the setting, and click “Save”.
- To remove an existing account, select the account you want, and click “Delete”.
- To save your changes, click “Save”.
- To define the maximum account creation number, key in the number in “Max User(s)” column from 1 to 20, and click “Update”.

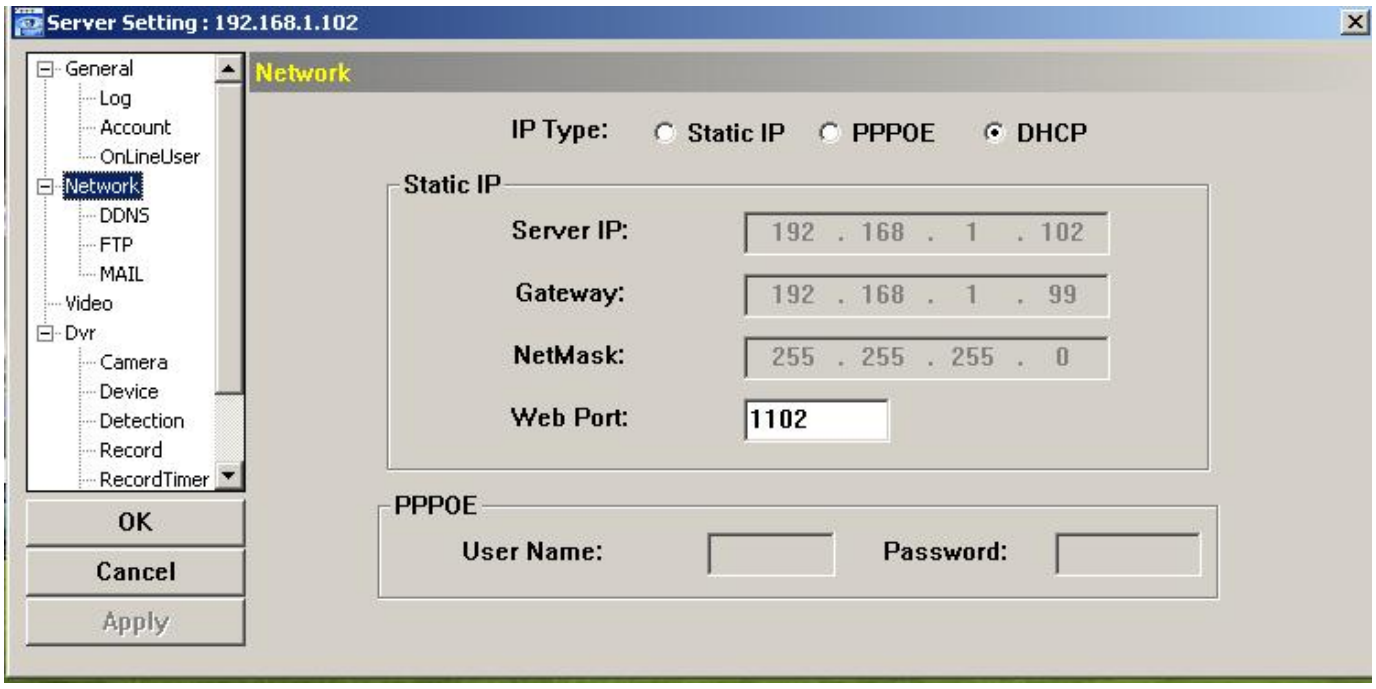
◆ Online User

In “General” → “Online User”, you can check all the online user information. To update the user information, click “Refresh”.



Network

In “Network” and its sub-menu, “DDNS”, you can set the DVR network configuration. The network configuration allows the DVR to connect to the LAN or Internet.



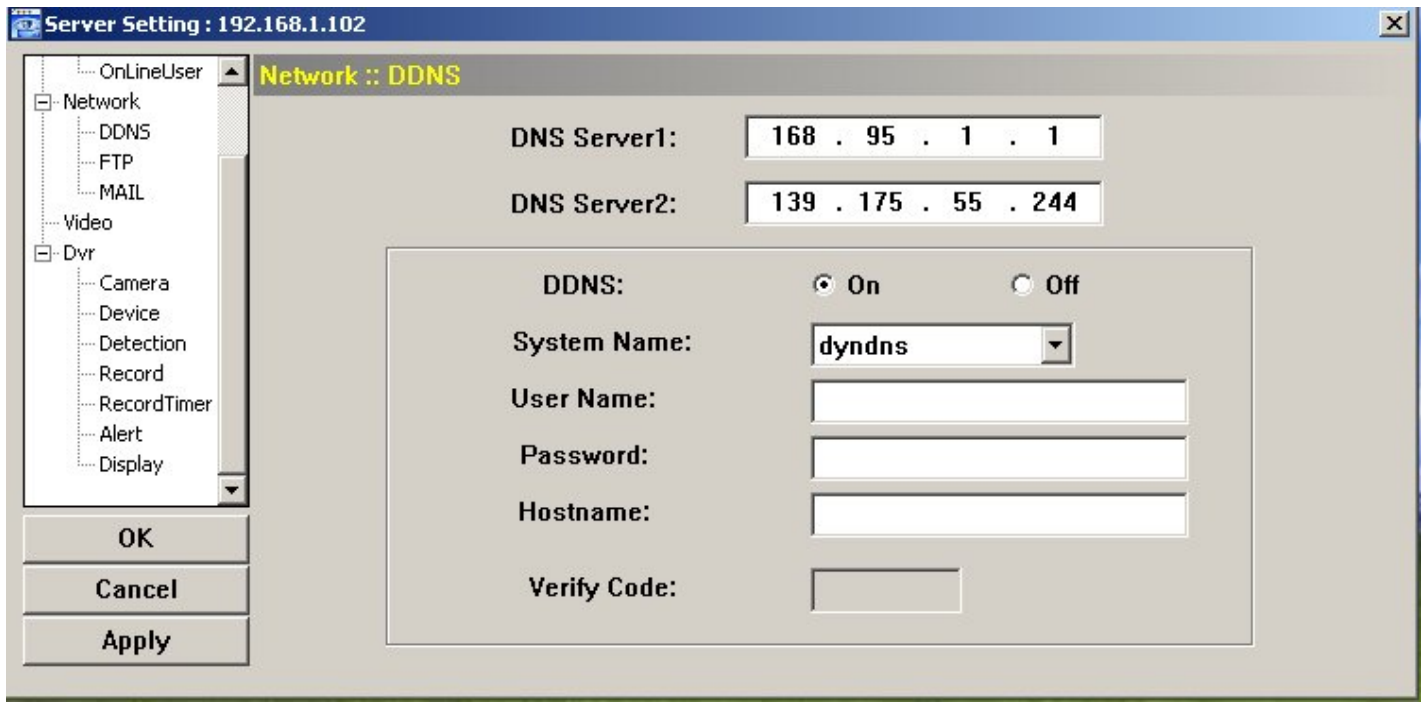
Select the network type you will be using for DVR connection. There are 3 network connection types: Static IP, PPPOE and DHCP.

Note: PPPOE and DHCP network connection types are required to apply the DDNS service to get a "Hostname" to correspond to a dynamic IP address. Please refer to "DDNS" at page 51 for details.

Function	Description
Web Port	Typically, the default TCP port used by HTTP is 80. However, in some cases, it is better to change this port number for added flexibility or security. The valid web port number ranges from 1 to 9999.
Static IP	Computers are communicated and recognized by their own unique IP addresses over the Internet. "Static IP" provided by your ISP (Internet Service Provider) means the IP address of the computer is fixed. Key in the server IP address, gateway and network information provided by your ISP provider to configure a static IP network connection.
PPPOE	PPPOE stands for Point-to-Point Protocol over Ethernet. Users can easily have the Internet service as long as they're ready for the following things: 1) Insert an Ethernet card into the PC. 2) Obtain the ADSL service via any ISP. 3) Obtain and install the PPPOE software CD. When everything is ready, choose the "PPPOE" IP type, and key in the user name and password provided by your ISP. Then, select "Network" → "DDNS" to set DDNS settings. For detailed DDNS settings, please refer to "DDNS" at page 51.
DHCP	This DHCP function needs to be supported by a router or cable modem network with the DHCP service. Choose the "DHCP" IP type, and select "Network" → "DDNS" to set DDNS settings. For detailed DDNS settings, please refer to "DDNS" at page 51.

◆ DDNS

You need to apply a DDNS account before setting PPPOE or DHCP connection. DDNS is a service for transforming the dynamic IP corresponding to a specific “host name”. Go to a website which provide free DDNS services and apply a host name.



DDNS Apply:

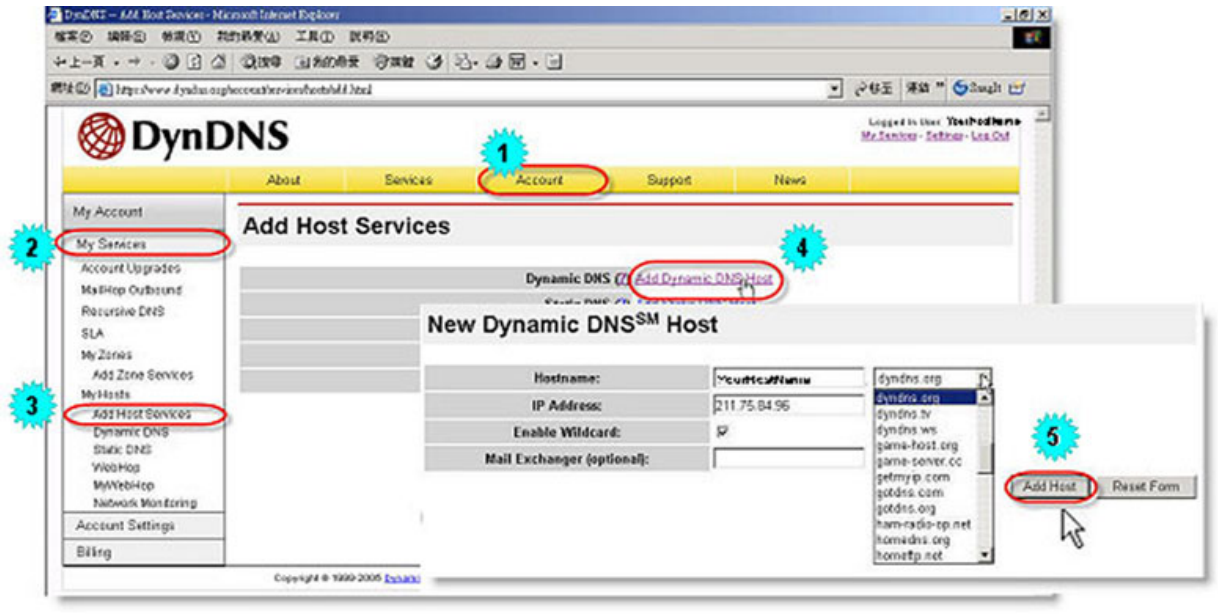
a). Go to a website which provide the free DDNS service, for example, http://www.dyndns.org.

b). Create an account in DynDNS.

c). After creating one account, users will receive a confirmation E-mail within a few minutes. To complete the registration, please follow the instructions received.
Users must complete these steps within 48 hours to complete the registration. If the confirmation E-mail was not received within an hour, request “password reset” (http://www.dyndns.org/account/resetpass/).

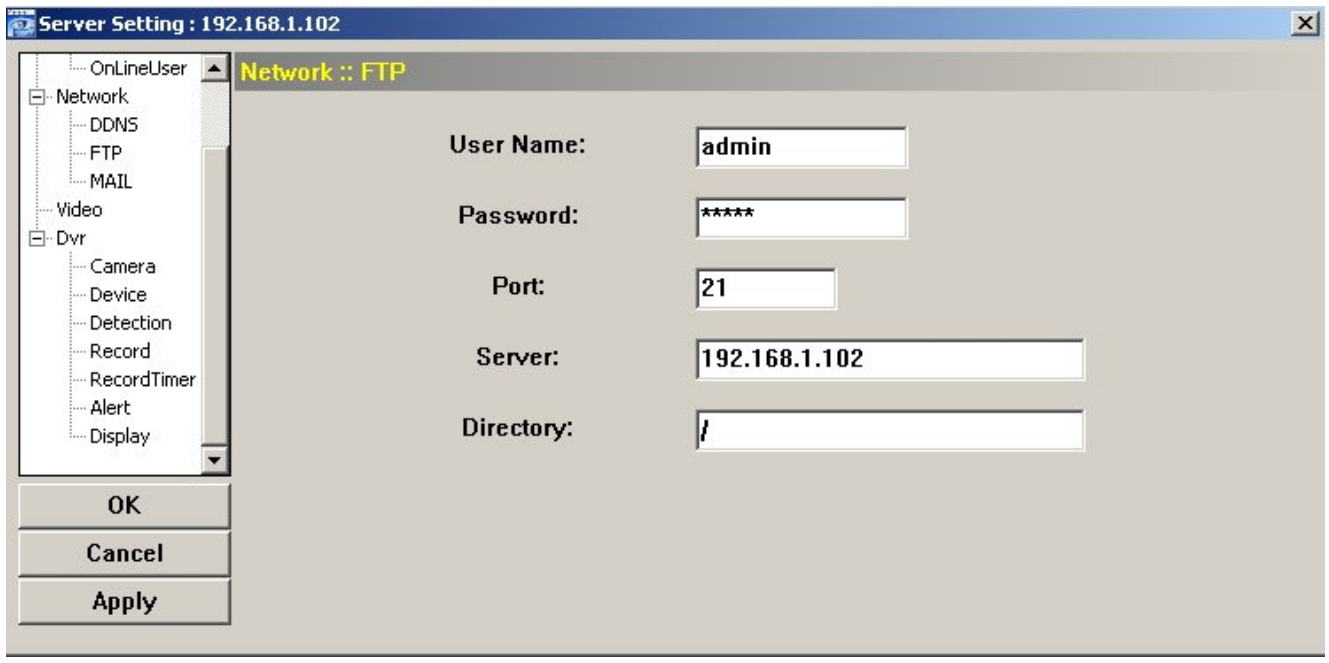
d). Use the DDNS username and password to log into the DynDNS.

e). Create a host name:
After login, click “Account” → “My Service” → “Add Host Services” → “Add Dynamic DNS Host”. Enter and choose a host name, and click “Add Host”. Then, your DDNS host name is created.



◆ FTP

If the FTP notification function is activated, the DVR will upload the captured images to the specified FTP site once alarm-trigger or motion-trigger recording happened. Please enable the function of FTP notification in the “Alarm” menu first.



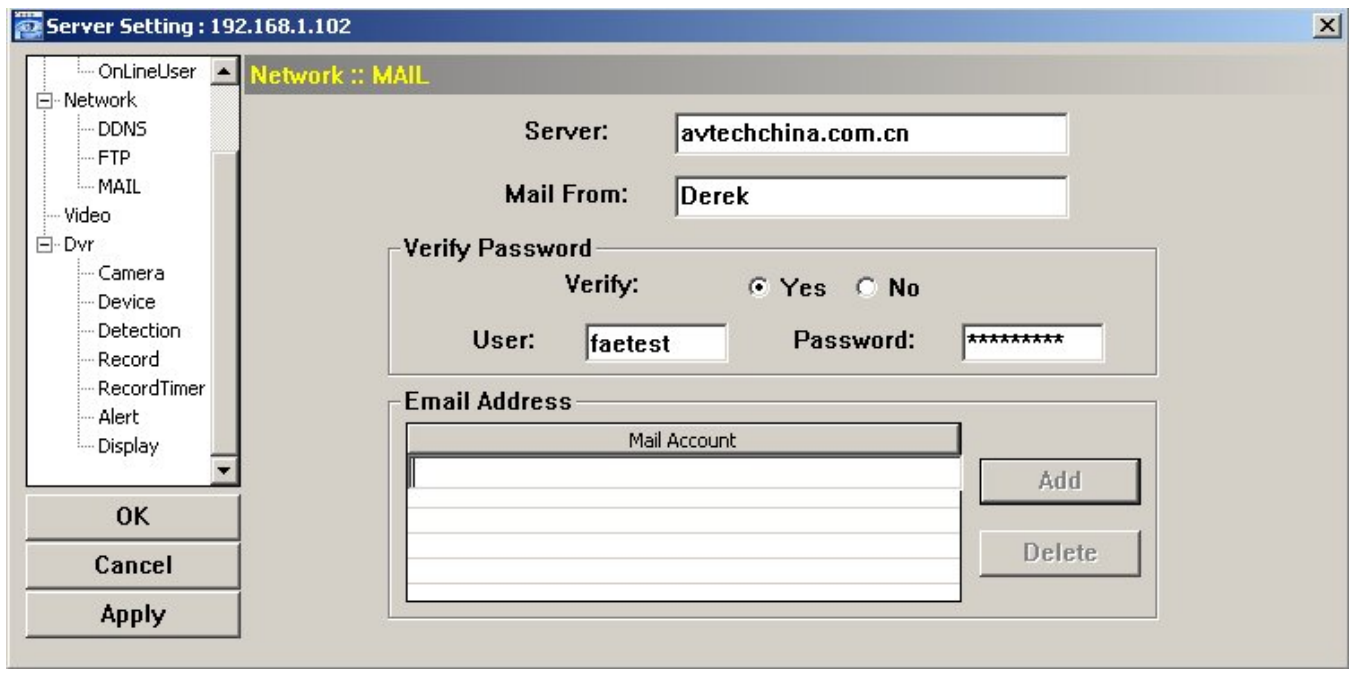
FTP Notification Function:

a. Enter the detailed FTP information.

b. After finishing the setting, click “APPLY” to confirm.

◆ MAIL

If the e-mail notification function is activated, the DVR will send an e-mail notification to the specified recipients once alarm-trigger or motion-trigger recording happened. Please enable the function of e-mail notification in the “Alarm” menu first.



Mail Notification Function:

a. Add the recipients’ E-mail accounts in “Mail Account” column.

Please type the entire E-mail address in the “Mail from” column to ensure E-mails will not be blocked by SMTP.

For detailed information (SMTP server, username and password), please check with your E-mail service supplier.

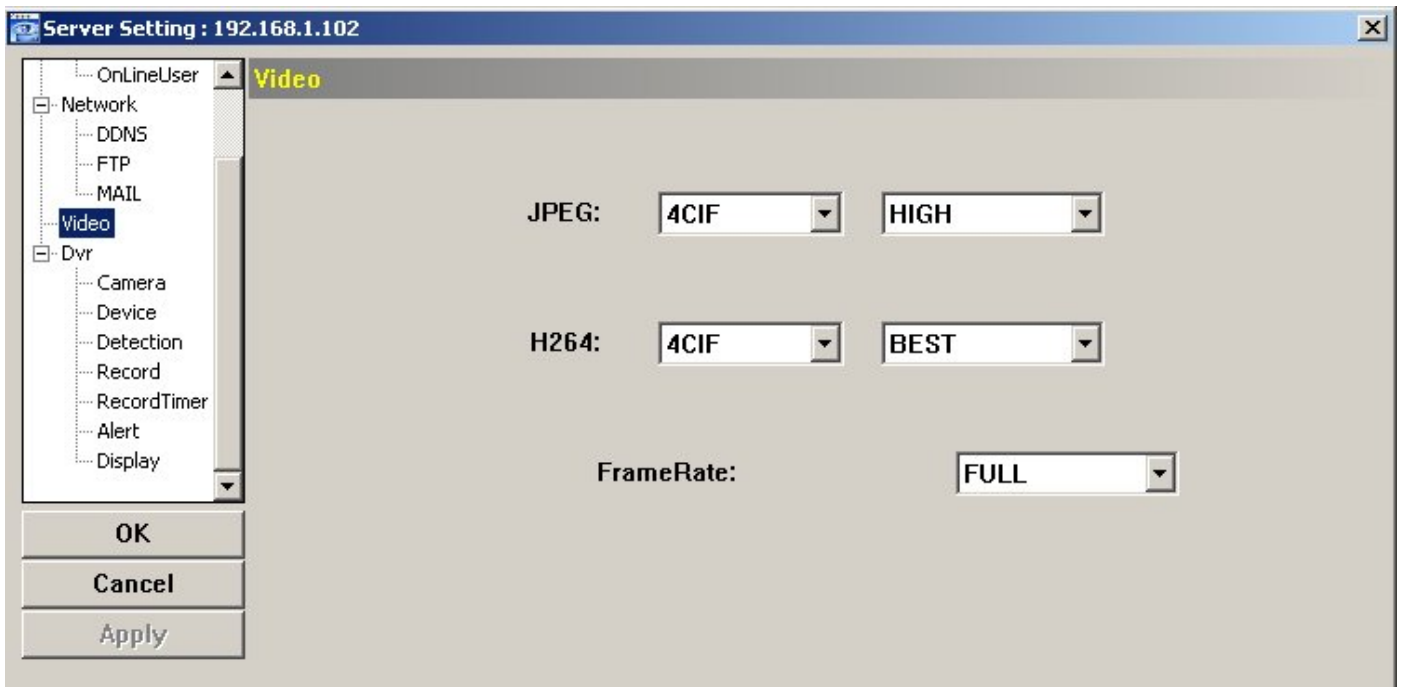
b. Some mail servers are required to verify the password. Please enter the “user name” and “password”.

c. After finishing the setting, click “APPLY” to confirm.

Note: Mail addresses can be added up to 4.

Video

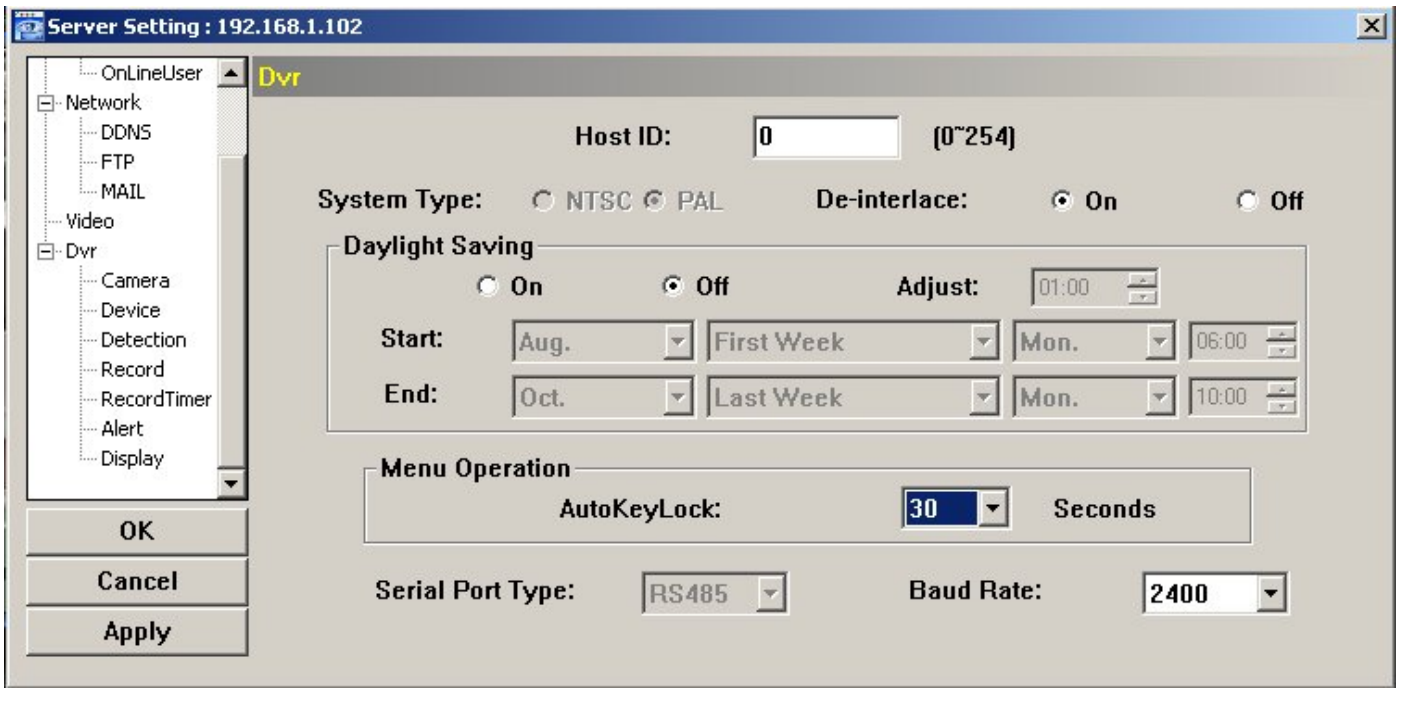
In “Video”, you can set the video web transmission size and quality, and the frame rate for transmitting.



Function	Description
JPEG	Choose the image size (4CIF / CIF) and picture quality (BEST / HIGH / NORMAL / BASIC) when the web transmission format is JPEG.
H264	Choose the image size (4CIF / CIF) and picture quality (BEST / HIGH / NORMAL / BASIC) when the web transmission format is MPEG.
FrameRate	Choose the frame rate for transmitting (FULL / HALF / ONE THIRD / QUARTER / ONE FIFTH/ ONE TENTH).

Dvr

In “Dvr” and its sub-menus, “Camera”, “Detection”, “Record”, “Record Timer”, “Alert” and “Display,” you can set DVR general functions, such as the host ID, the record schedule, alerts, motion detection, and text or icon display, etc.

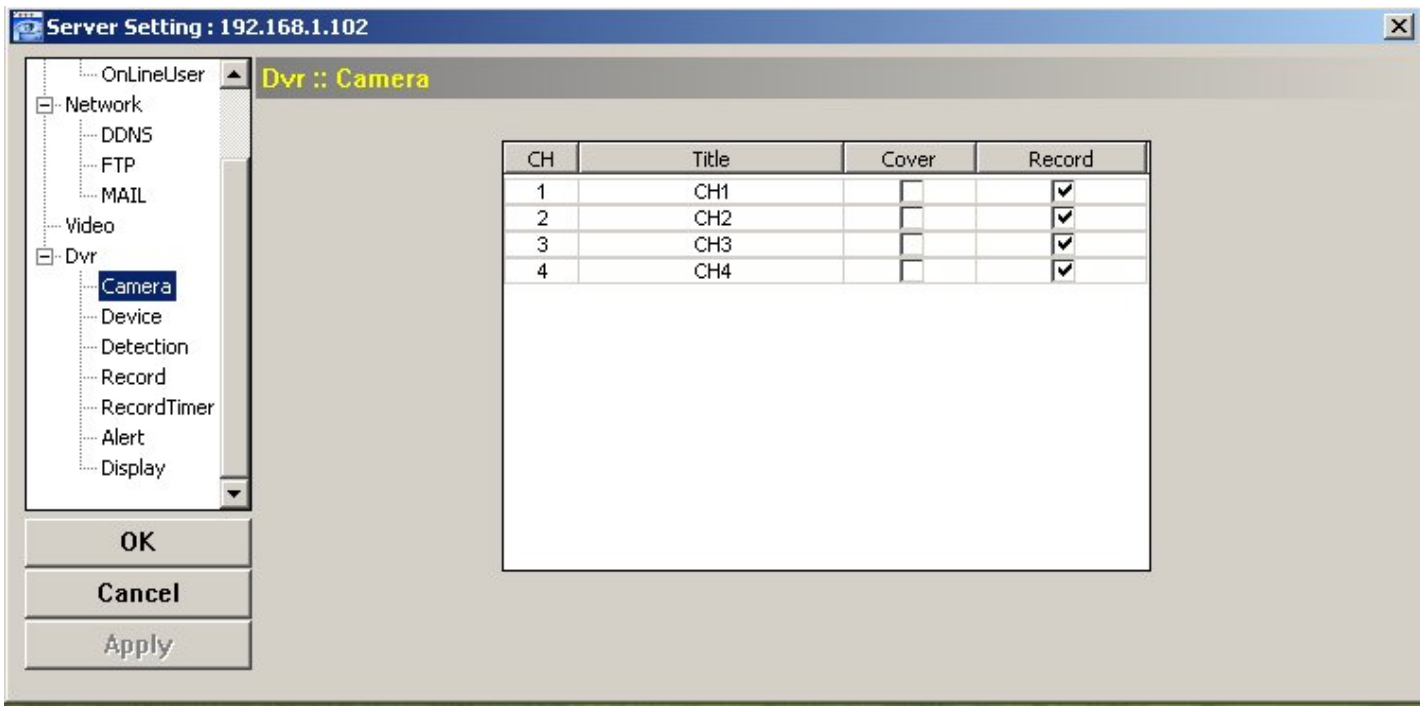


In “Dvr”, you can see the following items:

Function	Description
Host ID	Set the host ID from 0 to 254. The default value is 0.
System Type	Display the current system type (NTSC / PAL). It’s automatically detected.
De-interlace	Choose to reduce (ON) or ignore (OFF) the vibration of the paused picture.
Daylight Saving	Specify whether to use daylight saving time (ON / OFF). If this function is enabled, set the time period (START / END), and adjust the daylight saving time in hours (ADJUST).
Menu Operation	Select the time-out in seconds after which the DVR keys will be automatically locked when no one is operating the DVR for a period of time (0 / 30 / 60 / 120). The default value is 30.
Serial Type	Display the serial type (RS485) used by this DVR. It’s automatically detected.
BaudRate	Choose a baud rate used by this DVR from the drop-down list (2400 / 9600 / 19200 / 38400 / 57600 / 115200). The default value is 2400.

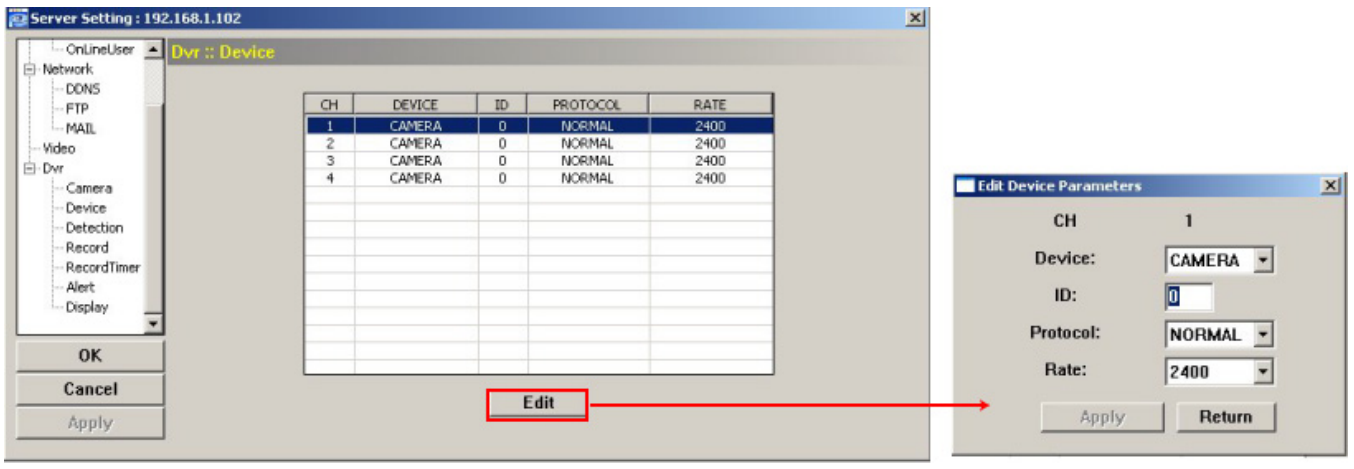
◆ Camera

In “Dvr” → “Camera”, you can specify a channel to enable the recording function by selecting the check box “Record”, choose to activate the “Covert Recording” function by selecting the check box “Cover”, and rename the channel title which will be displayed in the live view screen by double-clicking the channel title.



◆ Device

Select the device type (CAMERA / PTZ) according to the connected cameras for each channel. Click “Edit” or double click the item to enter the setting box.



The submenu items are described below:

a. Device Type: Choose either normal camera or PTZ camera.

b. ID No.: Set the ID number (0 ~ 255) of the connected PTZ camera.

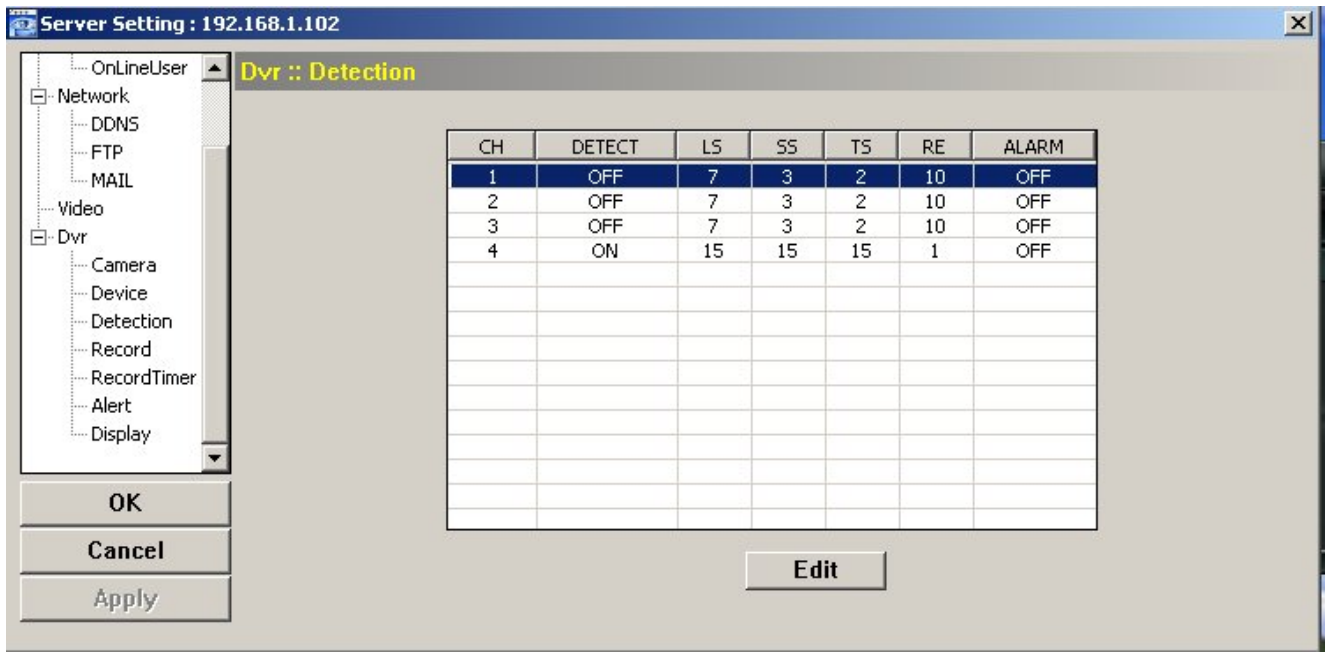
c. Protocol Type: Choose “NORMAL” or “P-D” protocol. It is recommended to select PELCO-D protocol for the connected PTZ camera of other brands. Please choose Normal if it’s AVTEHC PTZ Camera

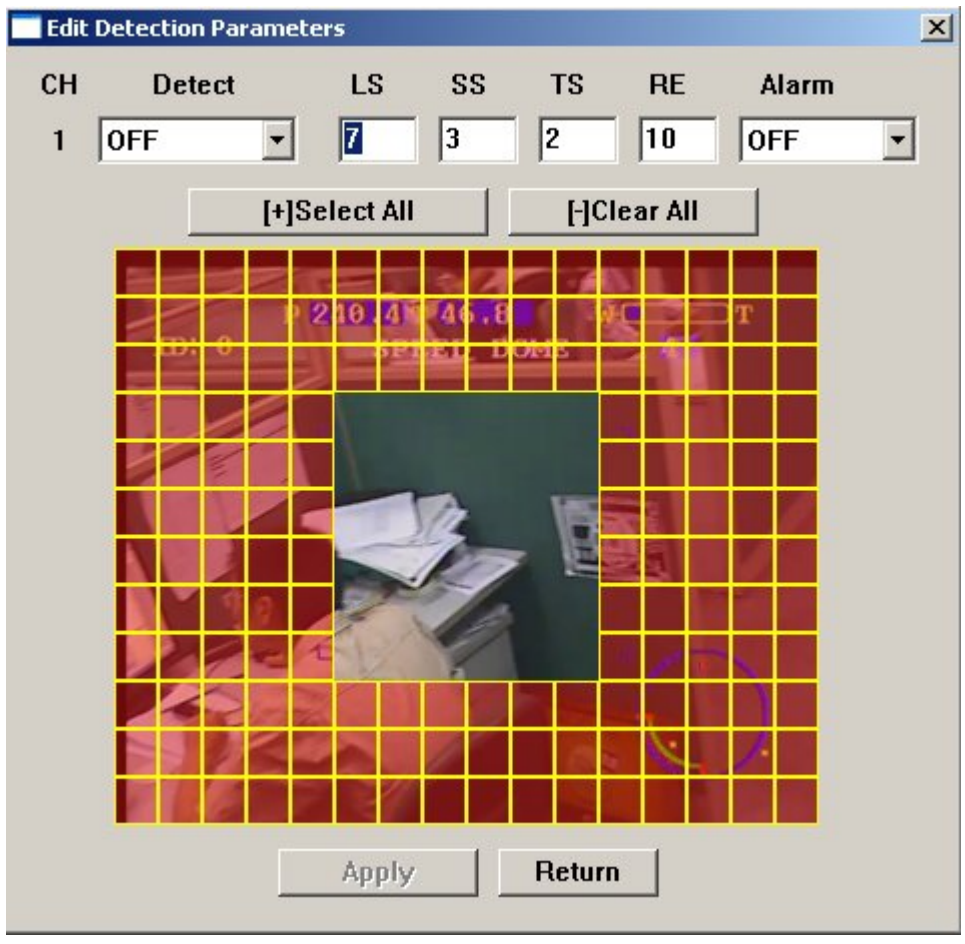
d. Baud Rate: Set the baud rate of each channel (2400, 4800, 9600, 19200, 38400, 57600).

e. After setting, click “OK” and then click “APPLY” button to confirm.

◆ Detection

Select the desired channel, and click “Edit” or double click the item to enter the motion detection sensitivity and area-setting page.



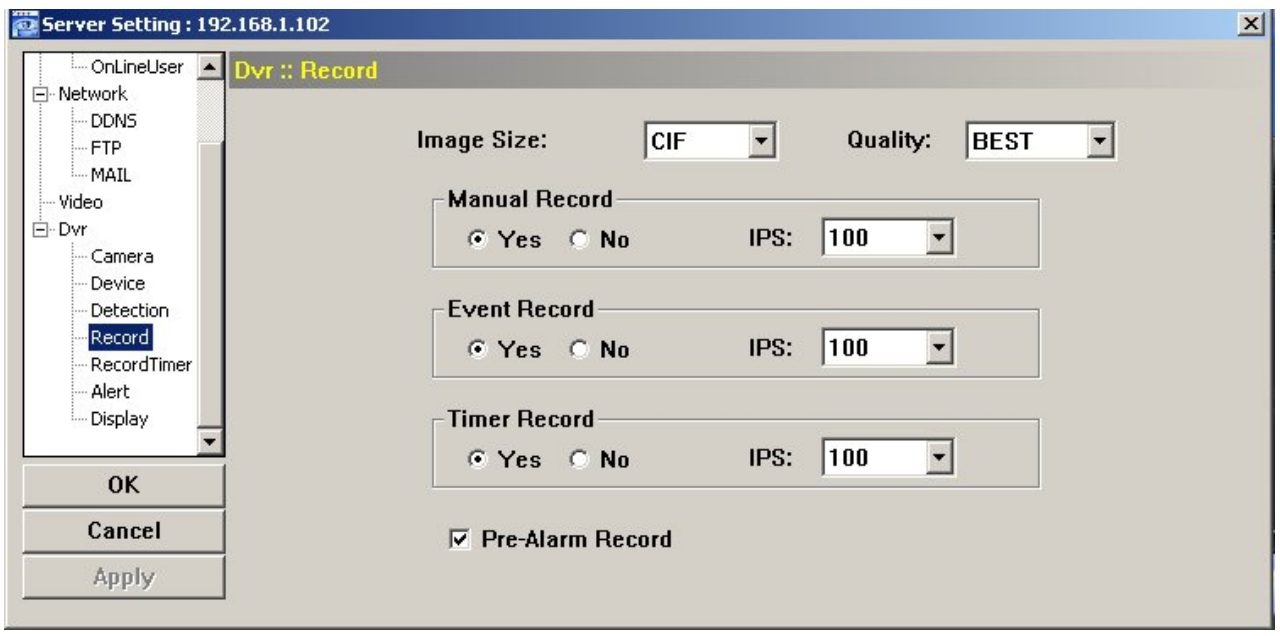


Please see the description below for each function:

Function	Description
DETECT	Enable (ON) or disable (OFF) the function of “Motion Detection”. If this function is enabled, you might need to set the motion detection sensitivity or simply keep the default values. For details, please see the description below.
Motion Detection Sensitivity (LS / SS / TS / RE)	Set the detection sensitivity in 4 different adjustable factors (LS / SS / TS / RE). LS “Level of Sensitivity”, is to set the sensitivity of comparing two different images. The smaller the value is, the higher sensitivity for motion detection. The highest sensitivity setting is 0, and the lowest sensitivity setting is 15. The default value is 7. SS “Spatial Sensitivity”, is to set the sensitivity for detecting the size of one object (the number of the grids) on the screen. The smaller the value is, the higher sensitivity for motion detection. The highest sensitivity setting is 0, and the lowest sensitivity setting is 15. The default setting is 3. TS “Time of Sensitivity”, is to set the sensitivity regarding how long one object stays in the detection area and triggers the recording. The smaller the value is, the higher sensitivity for motion detection. The highest sensitivity setting is 0, and the lowest sensitivity setting is 15. The default setting is 2. RE “Reference”, is to set a reference for detection. The default value is 10, which means the DVR will compare 10 continuous images at one time according to the sensitivity of LS, SS, TS simultaneously. The bigger the value is, the higher sensitivity for motion detection. The highest sensitivity is 61.
Alarm	Select N.C. (normal closed) / N.O. (normal opened) / OFF for the alarm polarity. For N.C. / N.O. contact details, please refer to “APPENDIX 2”.
Motion Detection Setting Area	Set the motion detection area by selecting the area grids with your mouse. Pink grids represent the area that is not being detected while the transparent grids are the area under detection. You can set multiple areas under detection. Click “－” (Clear All) to set the whole area undetected. Click “＋” (Select All) to set the whole area under detection.
Apply / Return	To save the setting, click “Apply” and return to “Server Setting” window. To discard the setting, click “Return” to directly return to “Server Setting” window without saving.

◆ Record

In “Dvr” → “Record”, you will see the following items for DVR record settings.

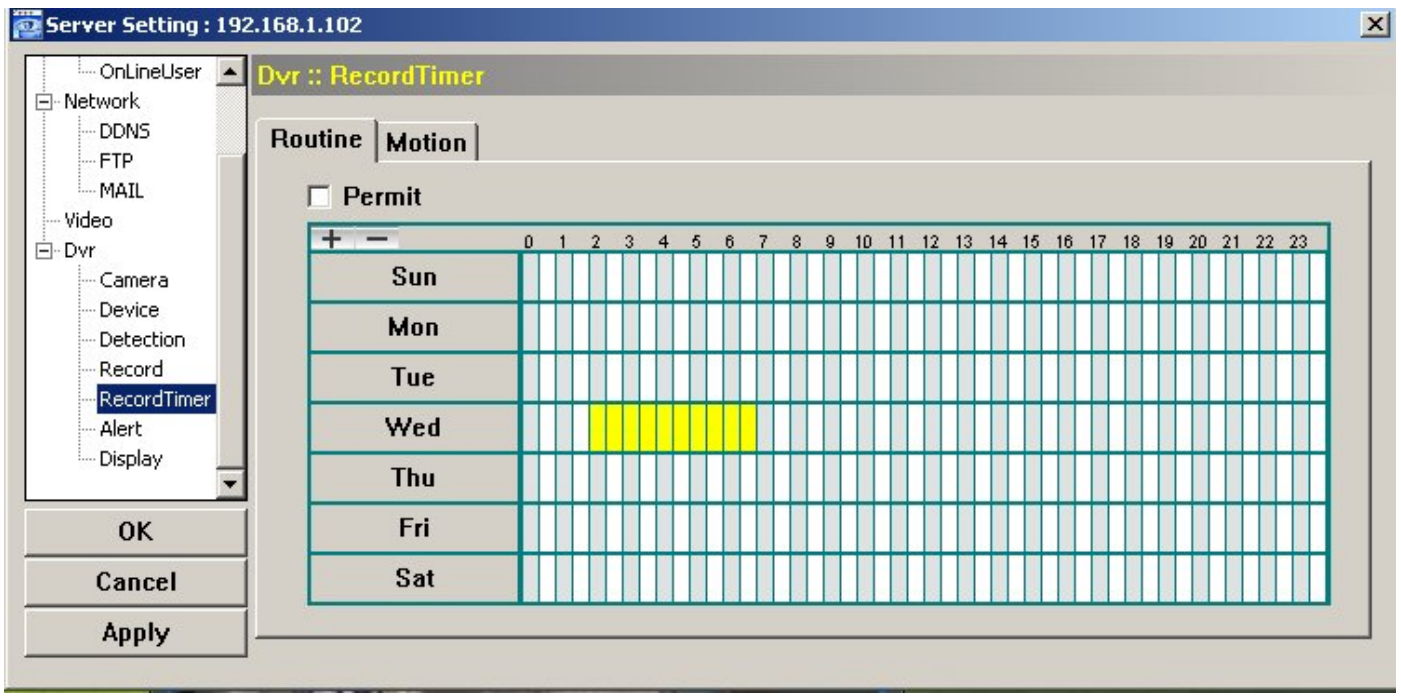


It's functions are like this:

Function	Description
Image Size / Quality	Choose the image size (FRAME / FIELD / CIF) and quality (BEST / HIGH / NORMAL / BASIC).
Manual Record / Event Record / Timer Record	Select the record type that the DVR will take recording (Yes / No), and select the IPS setting for the selected record type.
Pre-Alarm Record	Check this option if you want to enable the pre-alarm recording function. When any alarm is triggered, the DVR will record 8MB video data before the alarm event is actually happened.

◆ Record Timer

In this menu list, you can set the record schedule for normal recording or motion recording.



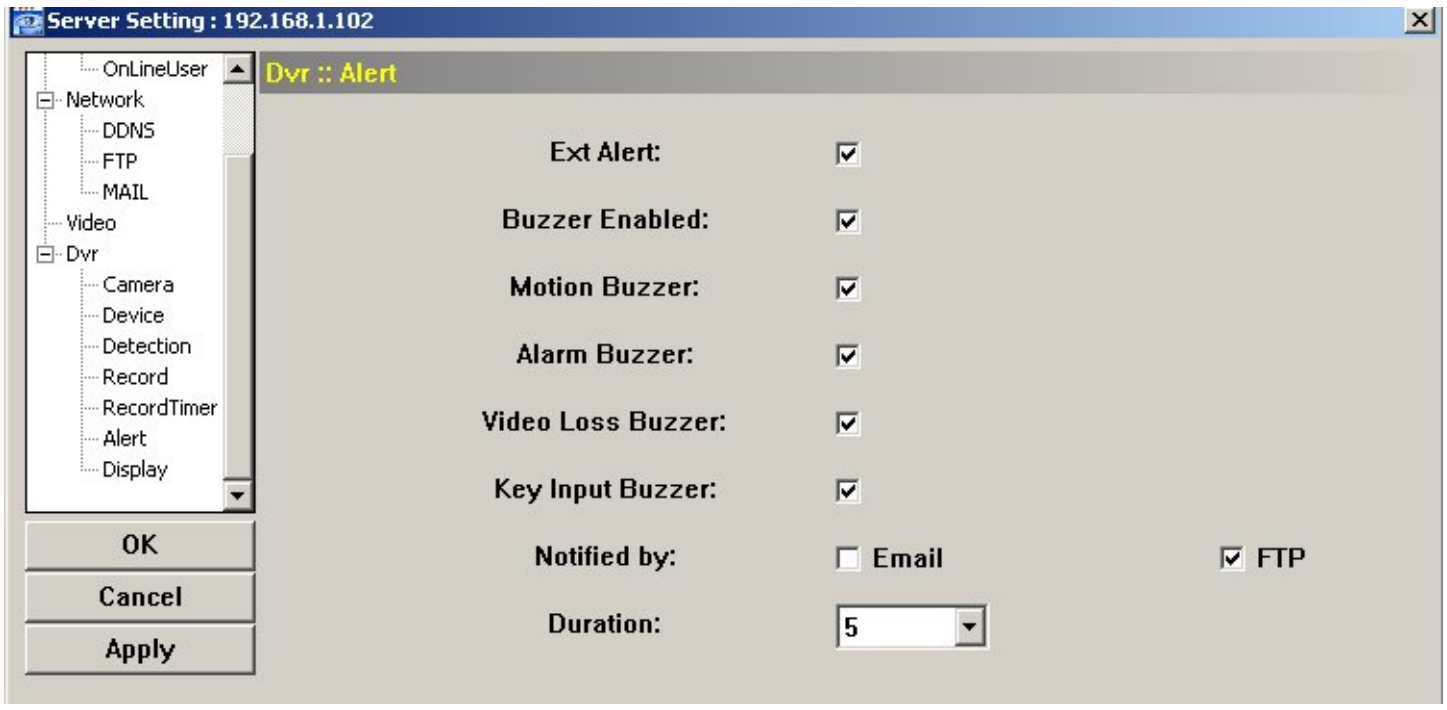
- Permit
  Select this checkbox to allow the record timer setting to be applied to the connected DVR. If this checkbox is deselected, the setting will not be applied to the connected DVR even when you click "Apply" and "OK".

- Routine / Motion
  Click "Routine" tab to select the time range for continuous recording, or "Motion" tab to select the time range within which the recording will be on when any movement is detected.

- Time Table
  Find the day and time you want to enable the recording. Then, click to select the time interval(s). Each interval represents 30 minutes.
  To enable the recording all the time, click "＋"; to clear the record timer setting, click "－".

◆ Alert

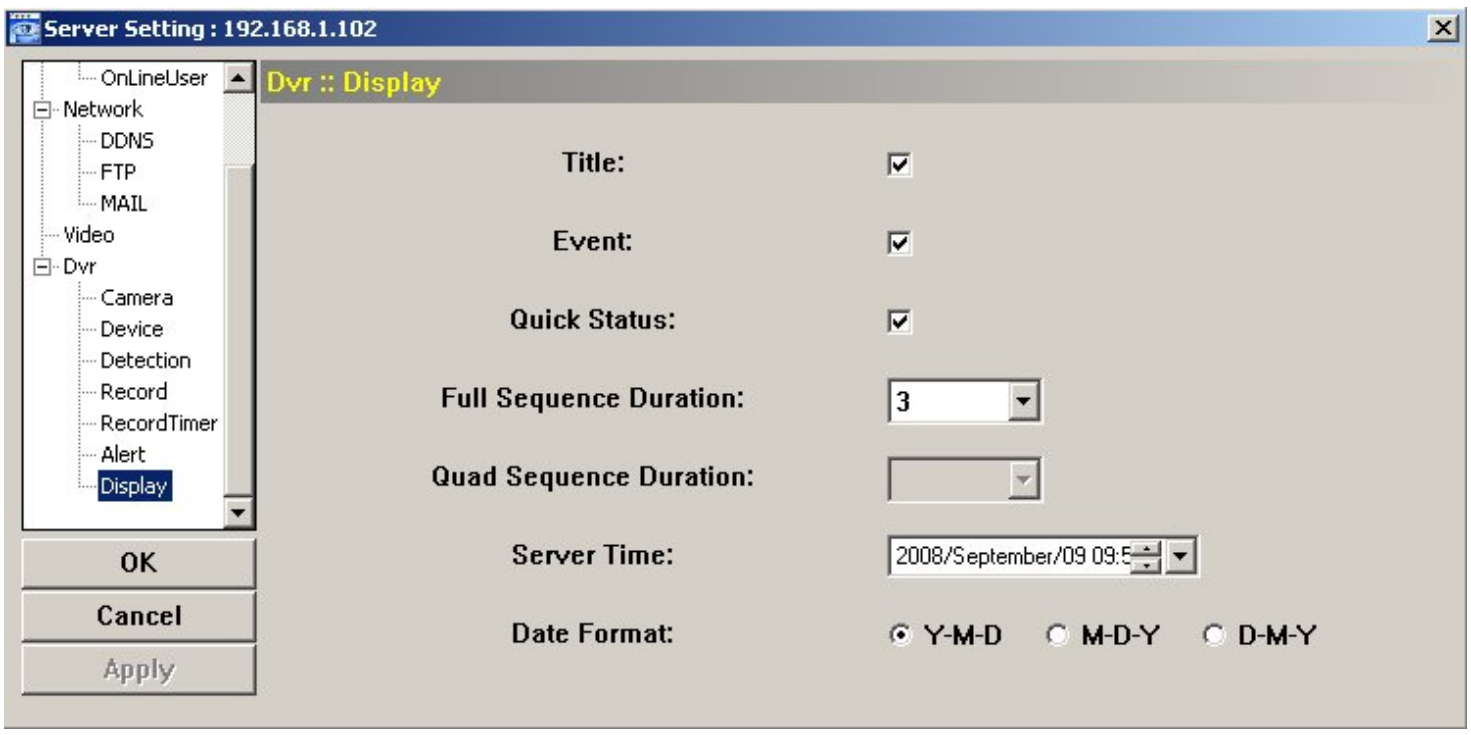
In “Alert”, you can set the DVR to beep for notification when there’s any alert happened. Check the buzzer option you want, and set how long the beep sound will be lasted.



Function	Description
Ext Alert	Check this option to enable the external alert.
Buzzer Enable	This option must be checked for “Motion Buzzer”, “Alarm Buzzer” and “Video Loss Buzzer” to take effects.
Motion Buzzer / Alarm Buzzer / Video Loss Buzzer / Key Input	Check one of these 4 options, and you will hear the beep sound when any movement is detected / the alarm is triggered / video loss occurs / any DVR key is clicked.
Notified by	Select the notification method when any event occurs: Email or FTP.
Duration	Set the alert and buzzers to beep for 5 / 10 / 20 / 40 seconds.

◆ Display

In “Display”, you can choose whether to display some text indication or icons, set the channel display switch time-out, set the DVR time remotely, and select the date format (Y-M-D / M-D-Y / D-M-Y).



Function	Description
Title	Select to display the channel title in the live view.
Event	Select to display the event symbol in the live view.
Quick Status	Select to display the quick status in the live view.
Full Sequence Duration	Set the time-out in seconds (3 / 5 / 10 / 15) after which the channel display will be switched by one channel (Full Sequence Duration).
Server Time	Set the DVR time remotely.
Date Format	Choose the date display format appropriate to your location (Y-M-D, M-D-Y and D-M-Y).

➢ Tools

Click " " to upgrade your DVR (Update Server), or select the language of the video viewer (Language).

Note: You need to be a supervisor to operate this function. For details, please see "Account" at page 48.

Note: Do not disconnect the power of your DVR while the upgrade process is in progress, or the DVR functions may not work properly or be unable to use.

◆ Update Server

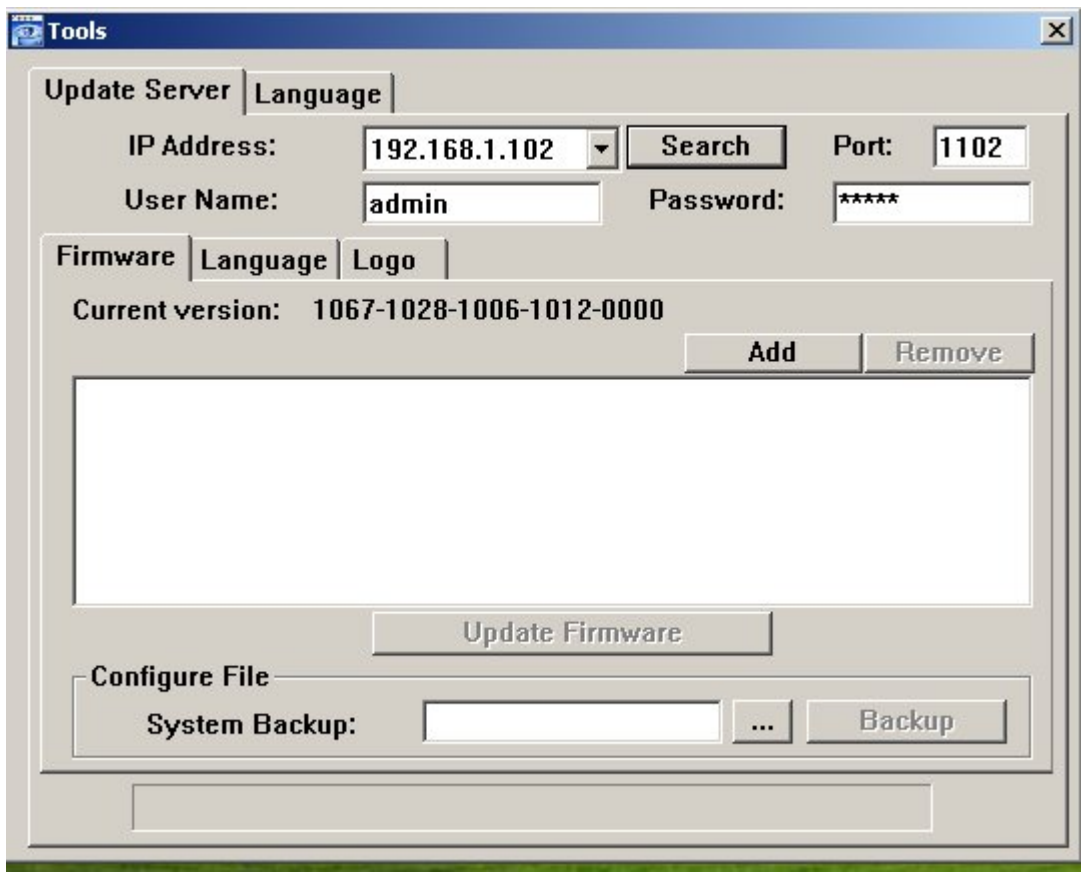
3 update options are available for this function: Firmware, Language and Logo.

Before performing any update, finish the following settings first:

1) Choose the IP address of the DVR whose firmware needs to be updated from the drop-down list, or click "Search" to find.

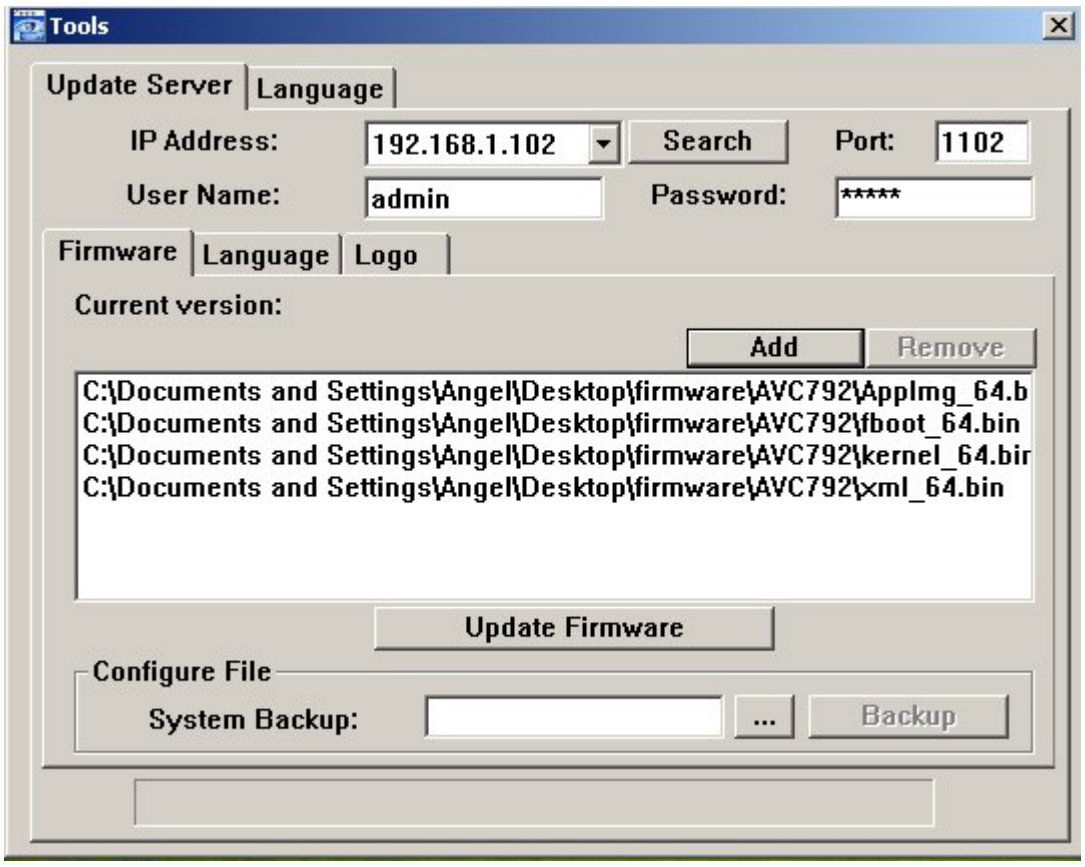
2) Key in the user name, password and port number used to access your DVR remotely.

3) Select the update option (Firmware / Language / Logo) you want. For details, please see the description below.



- **Firmware**

To upgrade your DVR firmware remotely, click “Firmware” tab, and follow the steps below:



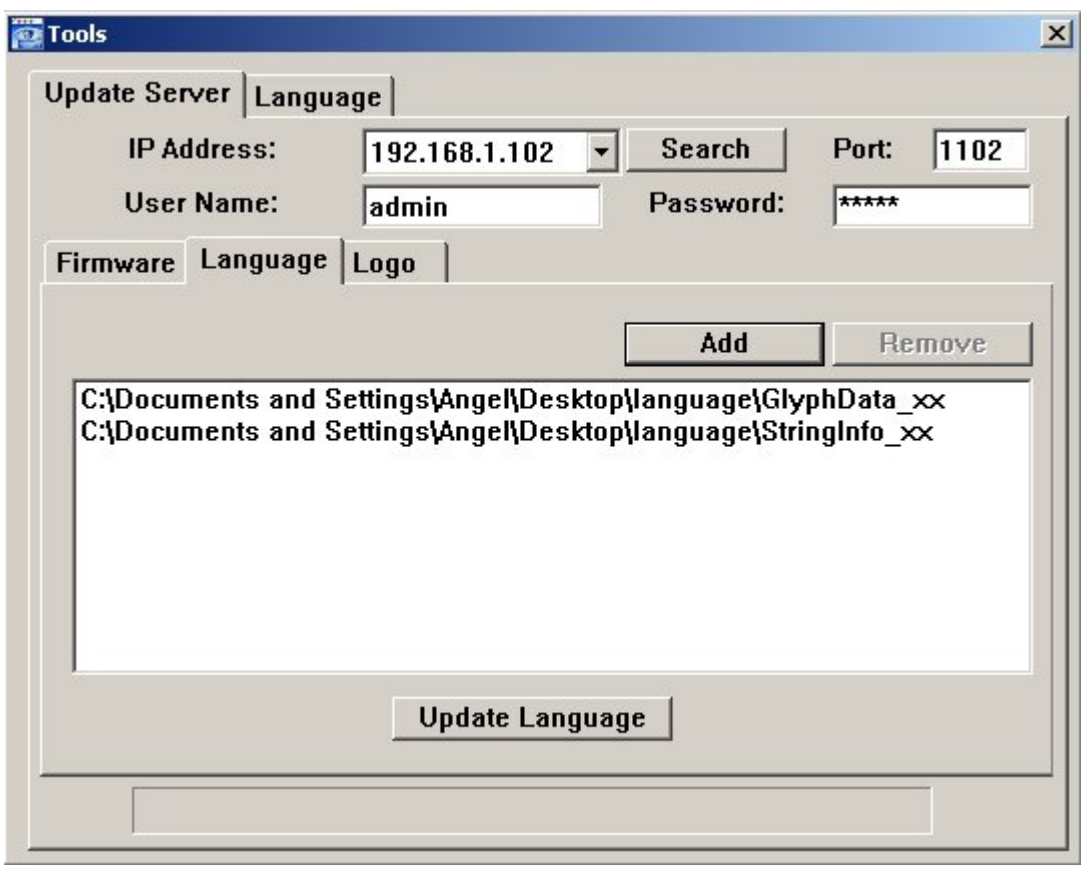
a). In the “Firmware” section, you will see the current firmware version. To upgrade the firmware version of your DVR, click “Add” to locate and select the firmware file. The file will be shown in the firmware list.

b). If you want to backup your system before upgrading the firmware version of your DVR, select “System Backup” in the “Configure File” section, click “**...**” to specify the location for saving system backup, and click “Backup” to start the backup process.

c). To start upgrading the DVR firmware, choose the file from the firmware list, and click “Update Firmware” to start the upgrade process.

- **Language**

To update the DVR OSD language, click “Language” tab, and follow the steps below:



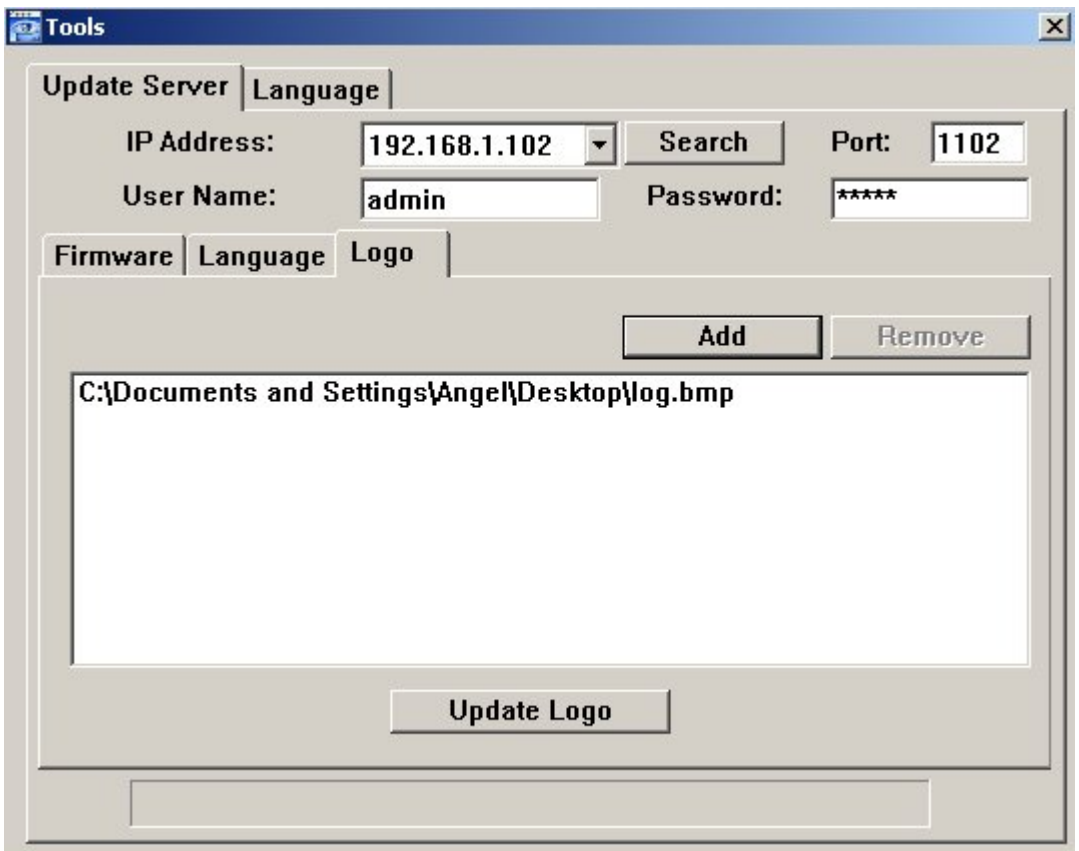
a). Get the language files you want to update from your distributor.

b) Click “Add” to locate and select the files needed. The files will be shown in the list. If you add the wrong file, select it and click “Remove”.

c). To start updating the OSD language, choose the files from the list, and click “Update Language” to start the upgrade process.

- **Logo**

To replace the logo shown in the DVR boot display, click “Logo” tab, and follow the steps below:



a). Prepare a graphic file in the “BMP” format for replacement.

Note: Use the image software to set the image size to 320 * 240, and save the image as an 8-bit (64-color) image in the "BMP" format.

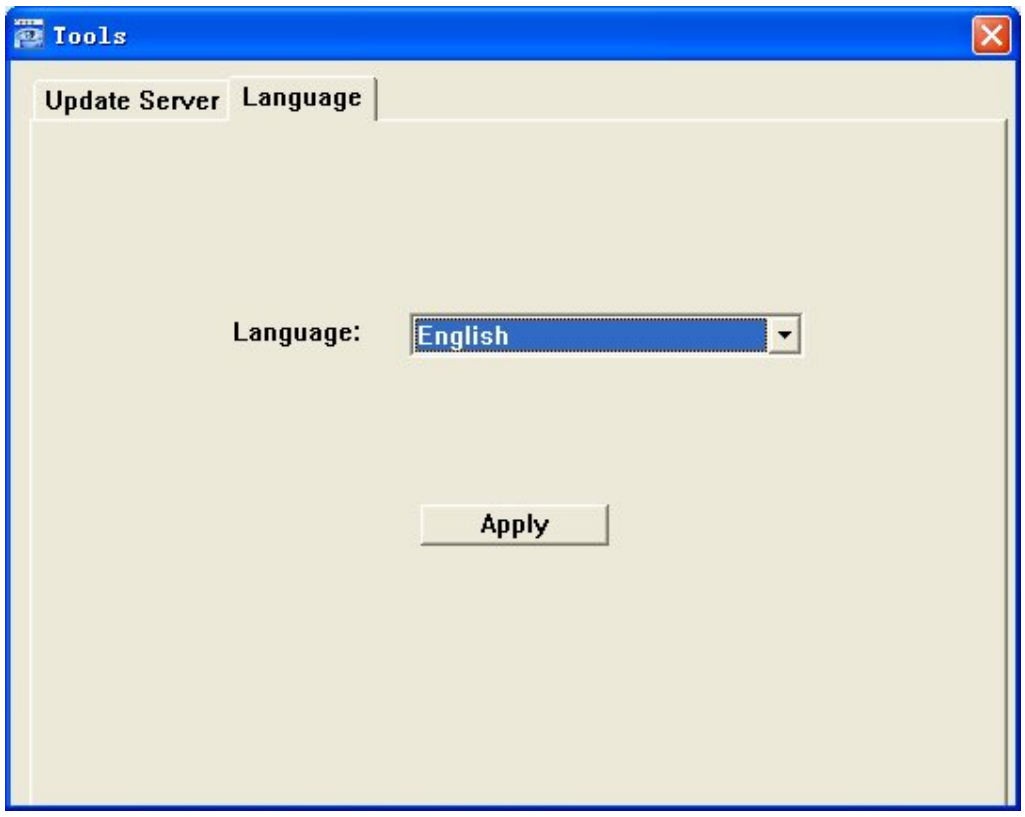
b) Click “Add” to locate and select the graphic file. The file will be shown in the list. If you add the wrong file, select it and click “Remove”.

c). To start updating the logo, choose the file from the list, and click “Update Logo” to start the upgrade process.

◆ Language

This software is available in English / Chinese / French / German / Portuguese / Spanish / Japanese.

Select a language from the drop-down list, and click “Apply”. You will be prompted to restart the application for this change to take effect.



➢ Status List

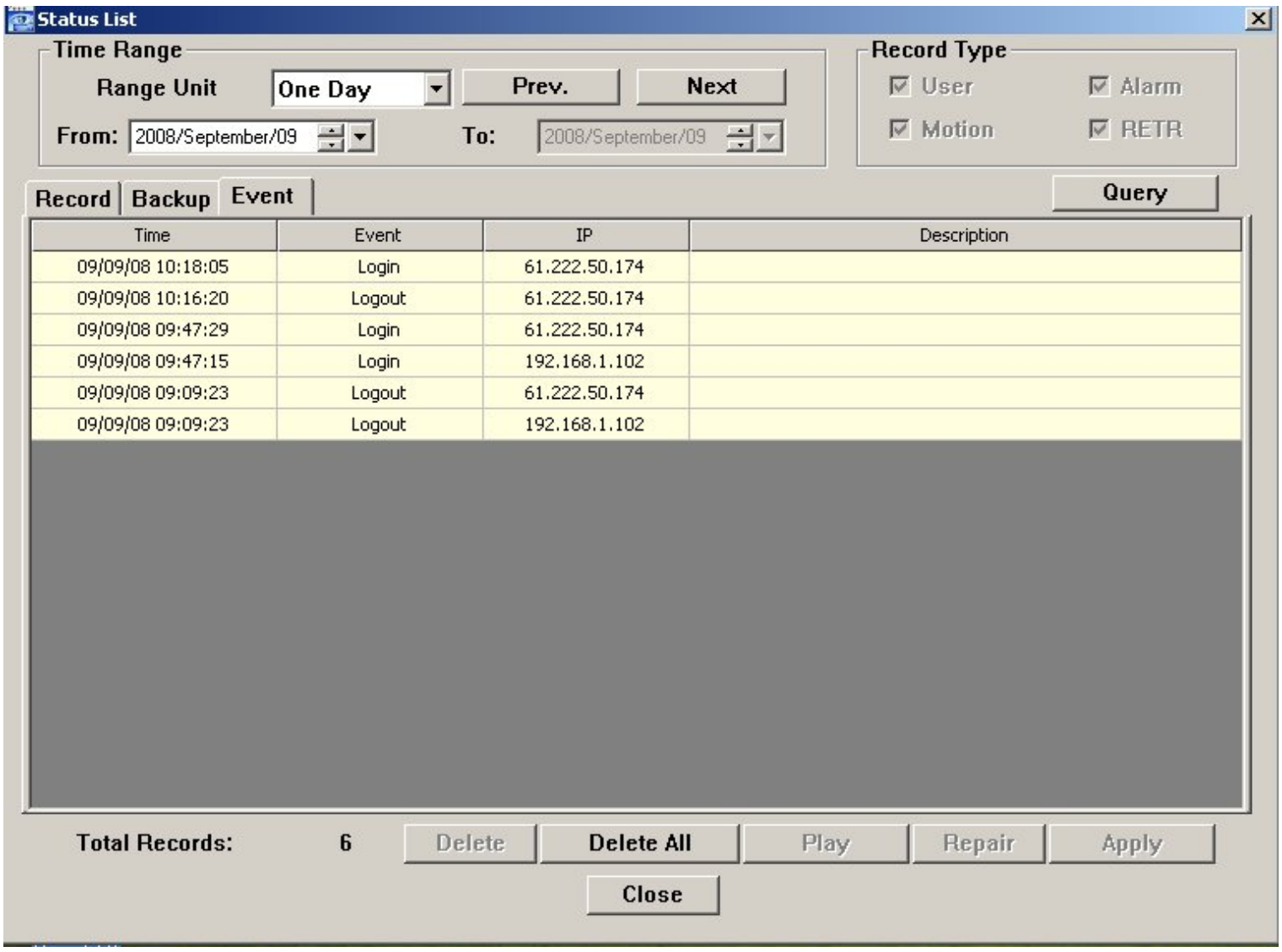
Click " " to view all the event and record logs (All), or search for the specific log(s) by date or by record type (Condition).

There are three types of logs: Record, Backup and Event. To playback the recorded data for a specific record or backup log, select the log, and double-click to start the video playback.

For detailed playback operation, please refer to "Playback Screen" at page 65.

◆ Event

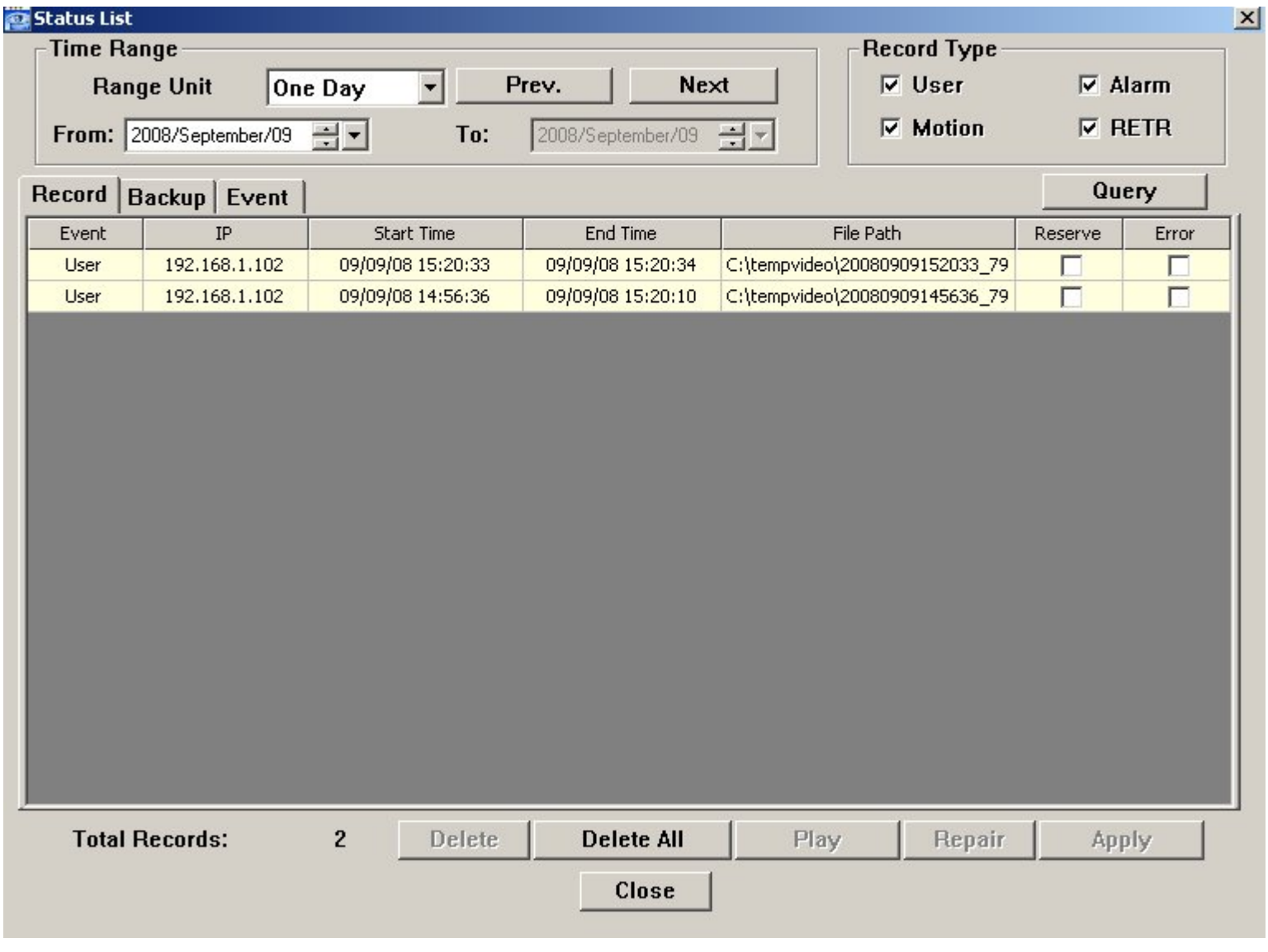
Select “Event” to search for the specific event log(s) by date.



Button / Function	Description
Range Unit	Set different time range unit (One Day / One Week) of the event logs.
Date Selection (From / To)	Choose the specific date range including the event / record logs you might want.
Query	When all the search criteria are set, click to search the specified logs. The result will be displayed in the log list, arranged by time from the earliest to the latest.
Delete / Delete All	Click “Delete” to remove the selected log(s), or click “Delete All” to clear the current log list. **Tip:** To select more logs all at once, click and hold the “Ctrl” key on your keyboard, and click to select the logs you want to remove.
Close	Click “Close” to quit this window.

◆ Record

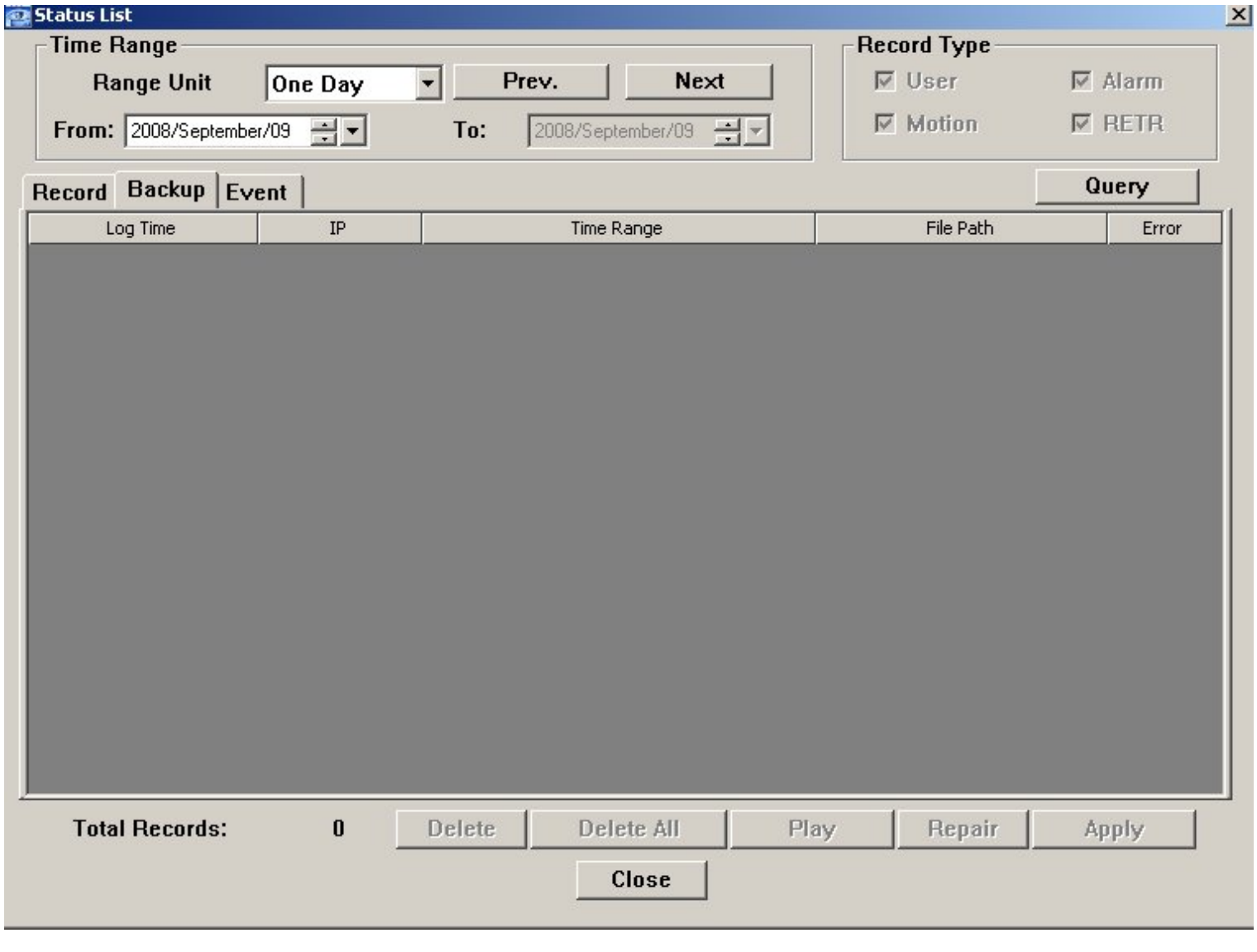
Select “Record” to search for the specific log(s) by date or by record type.



Button / Function	Description
Range Unit	Set different time range unit (One Day / One Week) of the event logs.
Date Selection (From / To)	Choose the specific date range including the event / record logs you might want.
Record Type	**This section is enabled only when the “Record” tab is selected.** Select the record type you want to search (User / Alarm / Motion).
Query	When all the search criteria are set, click to search the specified logs. The result will be displayed in the log list, arranged by time from the earliest to the latest.
Delete / Delete All	Click “Delete” to remove the selected log(s), or click “Delete All” to clear the current log list. **Tip:** To select more logs all at once, click and hold the “Ctrl” key on your keyboard, and click to select the logs you want to remove.
Play	Click to play the selected record log. The playback panel will be shown for your further operation. For playback details, please see “Playback Screen” at page 65.
Repair	Click to fix the log with errors.
Apply	**This button is available in the “Record” tab when the “Reserve” checkbox is checked or unchecked.** If you want to keep an important record log for future reference and it can’t be removed, check the “Reserve” checkbox, and click “Apply”. The selected log will be kept and won’t be deleted when somebody accidentally or intentionally chooses it and click “Delete” or “Delete All”.
Close	Click “Close” to quit this window.

◆ Backup

Select “Backup” to search for the specific log(s) by date.



Button / Function	Description
Range Unit	Set different time range unit (One Day / One Week) of the event logs.
Date Selection (From / To)	Choose the specific date range including the event / record logs you might want.
Query	When all the search criteria are set, click to search the specified logs. The result will be displayed in the log list, arranged by time from the earliest to the latest.
Delete / Delete All	Click “Delete” to remove the selected log(s), or click “Delete All” to clear the current log list. **Tip:** To select more logs all at once, click and hold the “Ctrl” key on your keyboard, and click to select the logs you want to remove.
Play	Click to play the selected download log. The playback panel will be shown for your further operation. For playback details, please see “Playback Screen” at page 65
Close	Click “Close” to quit this window.

◆ Playback Screen

When you select and play the recorded data for a specific log in “ ” (Status List) → “Record” or “Backup”, you will immediately go into the playback mode, and the following playback panel appears. For the function of each part on the panel, please refer to the following description.

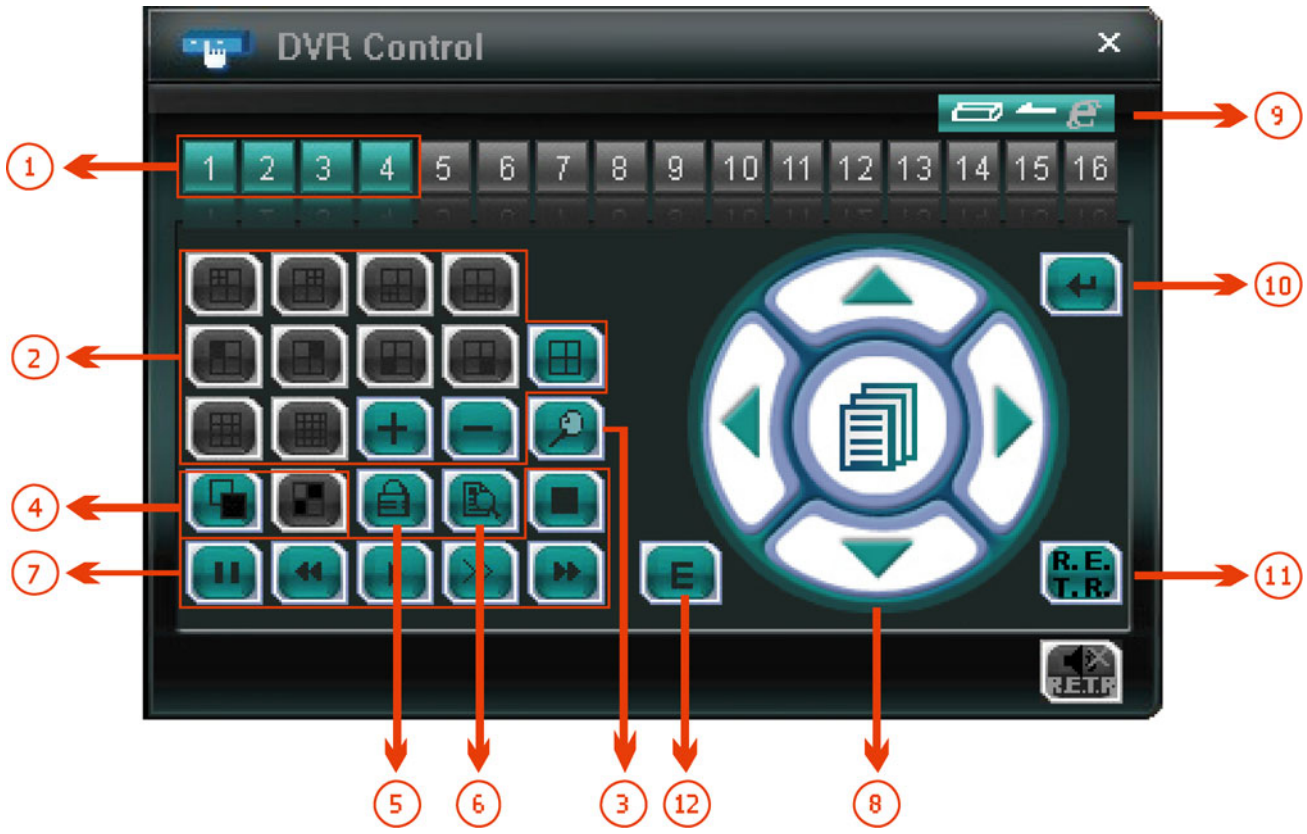
NO.	Function	Description
①	Playback / Download Info Display	This area shows the detailed playback / download information, such as the file name, record date and time, and the speed, etc.
②	Playback Progress Bar	This area shows the playback progress and the progress percentage.
③	Playback Operation	This area is enabled only when the playback is started. (Rewind) / (Forward) / (Stop) / (Pause) / (Play) **Rewind / Forward** Click once to get 2X fast rewind / forward, twice to get 4X, three times to get 8X, and four times to get 16X the highest.
④	De-Interlace	Click to reduce the vibration of the paused picture.

Information

To view the current network connection details, click this button.

DVR Control

When the AP is connected to the DVR, this DVR control panel will be enabled, and you can control the DVR remotely. For the function of each button, please refer to the following description.



NO.	Function	Description
1	Channel Selection	Click the channel No. 1 2 3 4 to see the live view of the selected channel.
2		: Quad View. You can also click " " or " " to go to the previous / next channel of the selected channel. (Note: The other buttons shadowed are invalid.)
3	Digital Zoom	Click this button to zoom in / out the selected channel image.
4	Full Sequence / Quad Sequence	**Full Sequence** Click to display each channel one by one, starting from CH1. When CH4 is displayed, it will start from CH1 again. To exit from this display mode, click any channel display mode.
5	Key Lock	Click to enable the DVR key lock function. To unlock the DVR, key in your password, and click .
6	Search	Click " " to enter the DVR Full List. You can check all the logs here, and select one of them to payback.
7	Playback	(Stop) / (Pause) / (Rewind) / (Play) / (Slow Playback) / (Forward) **Rewind / Forward** Click once to get 4X fast rewind / forward, twice to get 8X, three times to get 16X, and four times to get 32X the highest.
7	Playback	**Slow Playback** Click once to get 4X slow playback and twice to get 8X slow playback.
8	Menu and Arrow Keys	Click " " (Menu) to enter the menu / exit the menu mode. Click the arrow keys to move the cursor and make the selection:

NO.	Function	Description
		/ : Move the cursor up / down to select the previous / next menu or sub-menu function, or change the setting. / : Move the cursor left / right to the previous / next sub-menu items.
9	Network Independent On/Off	: Click it to activate / inactivate the network independent function.
10	Enter	Click " " to confirm the setting or enter your selection.
11	R.E.T.R.	Click it to activate the R.E.T.R. function.
12	Event Search	Click it to get access to the time & event search mode.

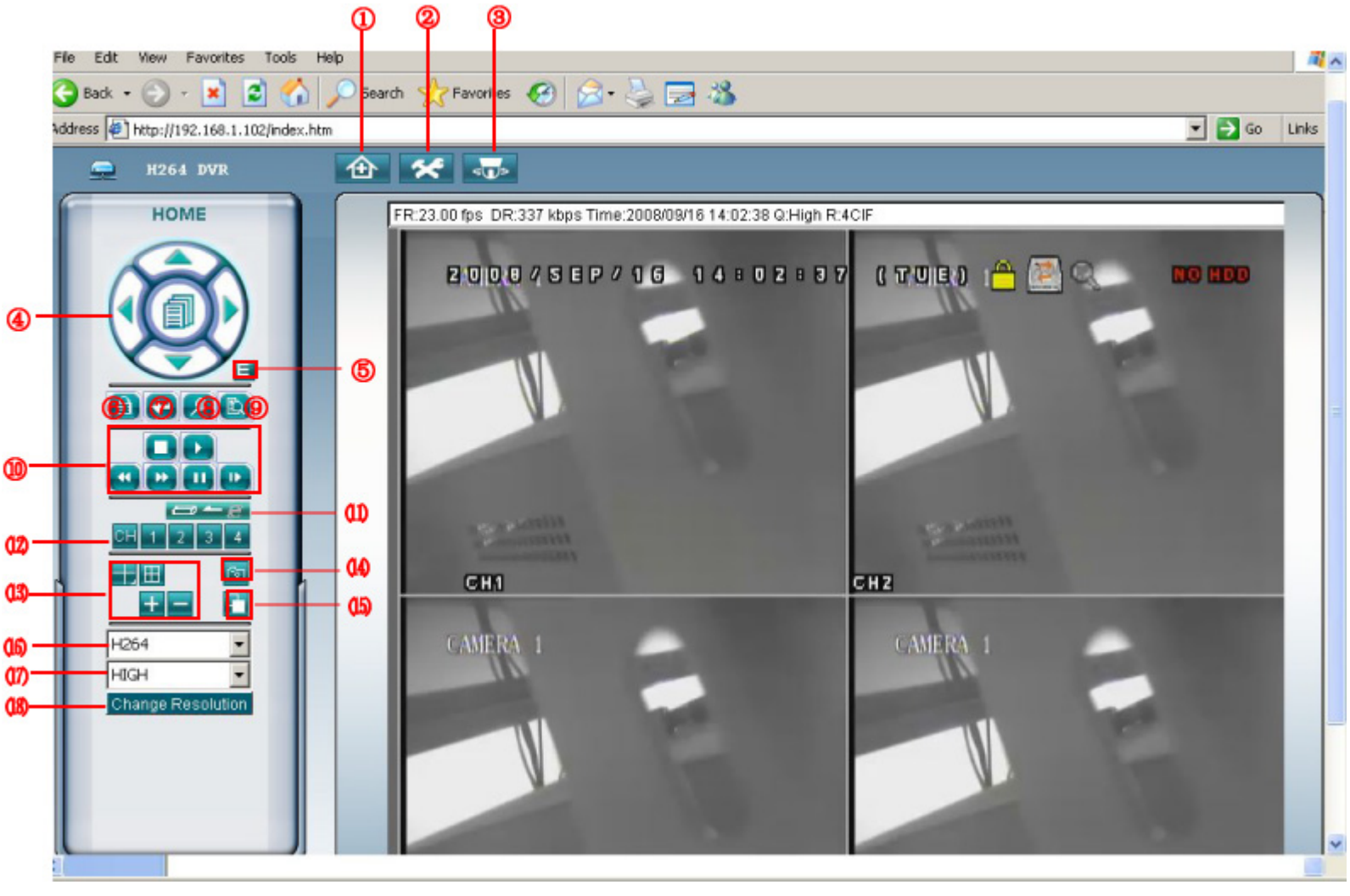
8.2 IE Web Browser

You can view the images or operate your DVR with IE web browser.

Note: The supported PC operation systems are Windows 2000 and Windows XP and Vista

Step 1: Key in the IP address used by your DVR in the URL address box, such as 60.121.46.236, and press Enter. You will be prompted to enter the user name and password to access the DVR.
If the port number your DVR used is NOT 80, you need to key in the port number additionally. The format is ***ipaddress*:*portnum***. For example, for IP address 60.121.46.236 and port No. 888, please key in "http://60.121.46.236:888" into the URL address box, and press "Enter".

Step 2: Enter the user name and password, the same as the ones used at AP login, and click "OK". You will see a similar screen as the following when the login information is correct.



NO.	Function	Description
1	Home	Click to go to the main page of the DVR

NO.	Function	Description
2	Config.	Click to go to the detailed DVR setting.
3	PTZ	Click to enter the PTZ mode.
4	Menu and Arrow Keys	Click to enter the menu / exit the menu mode. Click the arrow keys to move the cursor and make the selection: / : Move the cursor up / down to select the previous / next menu or sub-menu function, or change the setting. / : Move the cursor left / right to the previous / next sub-menu items.
5	Event	Click to enter the playback search settings screen.
6	Key Lock	Click to enable the DVR key lock function. To unlock the DVR, key in your password, and click .
7	Enter	Click to confirm the setting or enter your selection.
8	Digital Zoom	Click to zoom in / out the selected channel image.
9	Search	Click to enter the DVR full search menu. You can check all the logs here, and select one of them to payback.
10	Playback control buttons	(Stop) / (Play) / (Rewind) / (Forward) / (Pause) / (Slow Playback) **Rewind / Forward** Click once to get 4X fast rewind / forward, twice to get 8X, three times to get 16X, and four times to get 32X the highest. **Slow Playback** Click once to get 4X slow playback and twice to get 8X slow playback.
11	Network Independent On/Off	: Click it to activate / inactivate the network independent function.
12	Single Channel Selection	Click the channel No. (CH1 ~ CH4) to see the live view of the selected channel. You can also click or to go to the previous / next channel of the selected channel.
13	Display Mode	Click to show 4-cut display.
14	Snapshot	Click to have a snapshot.
15	Full Sequence	**Full Sequence** Click to display each channel one by one in cycle. To exit from this display mode, click any channel display mode.
16	Web Transmission	**H.264 / MPEG4 / JPEG / QuickTime** QuickTime is Apple's multimedia software. You need to have QuickTime installed in you operation system first. When "QuickTime" is selected, you will be promoted to enter the user name and password to access the server of the DVR.
17	Change Quality	**Best / High / Middle / Low** Click to change the image quality.
18	Change Resolution	**4 CIF / CIF** Click to change the image resolution (4CIF: 720*480 / CIF: 352*240)

8.3 Quick Timer Player

You can also use the QuickTime player to remotely log into the DVR and check the live view only.

Note: QuickTime is Apple's multimedia software. You need to have QuickTime installed in you operation system first, and you can access the DVR to see the live view. The version should be over 7.5.
If you have installed QuickTime, please skip Step 1.

Step 1: Go to Apple's official website to download QuickTime. The website address is as follows:
http://www.apple.com/quicktime/win.html

a). Click "Download" to go into the download page, and select to download the free player.

b). Leave your Email address, and click "Free Download Now" to download the latest QuickTime player.

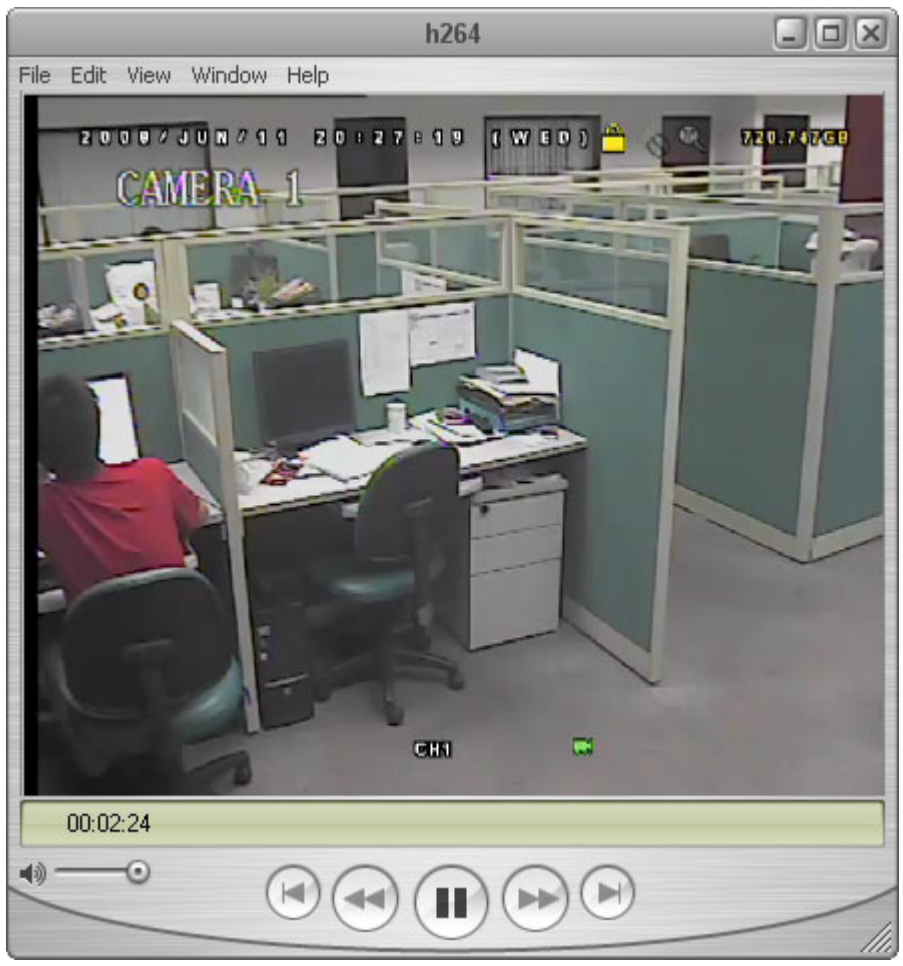
c). When the download is completed, execute the "QuickTimeInstaller.exe" file, and follow the on-screen instructions to finish the installation procedure.

Step 2: Open your QuickTime player. Select "File" → "Open URL", and key in the URL address.
The URL format is "rtsp://**ipaddress:portnumber**/live/h264" (E.g., "rtsp://121.34.153.79:80/live/h264").
Click "OK" to continue.

Step 3: A pop-up window will appear and prompt you to enter the authentication information. Key in the user name and password for accessing your DVR. The user name and password are the same as the ones you use to log into the AP.

If the information is correct, click "OK" to go on. If not, click "Cancel" to quit the accessing.

Step 4: When the login is successful, you will see a similar screen as the following.



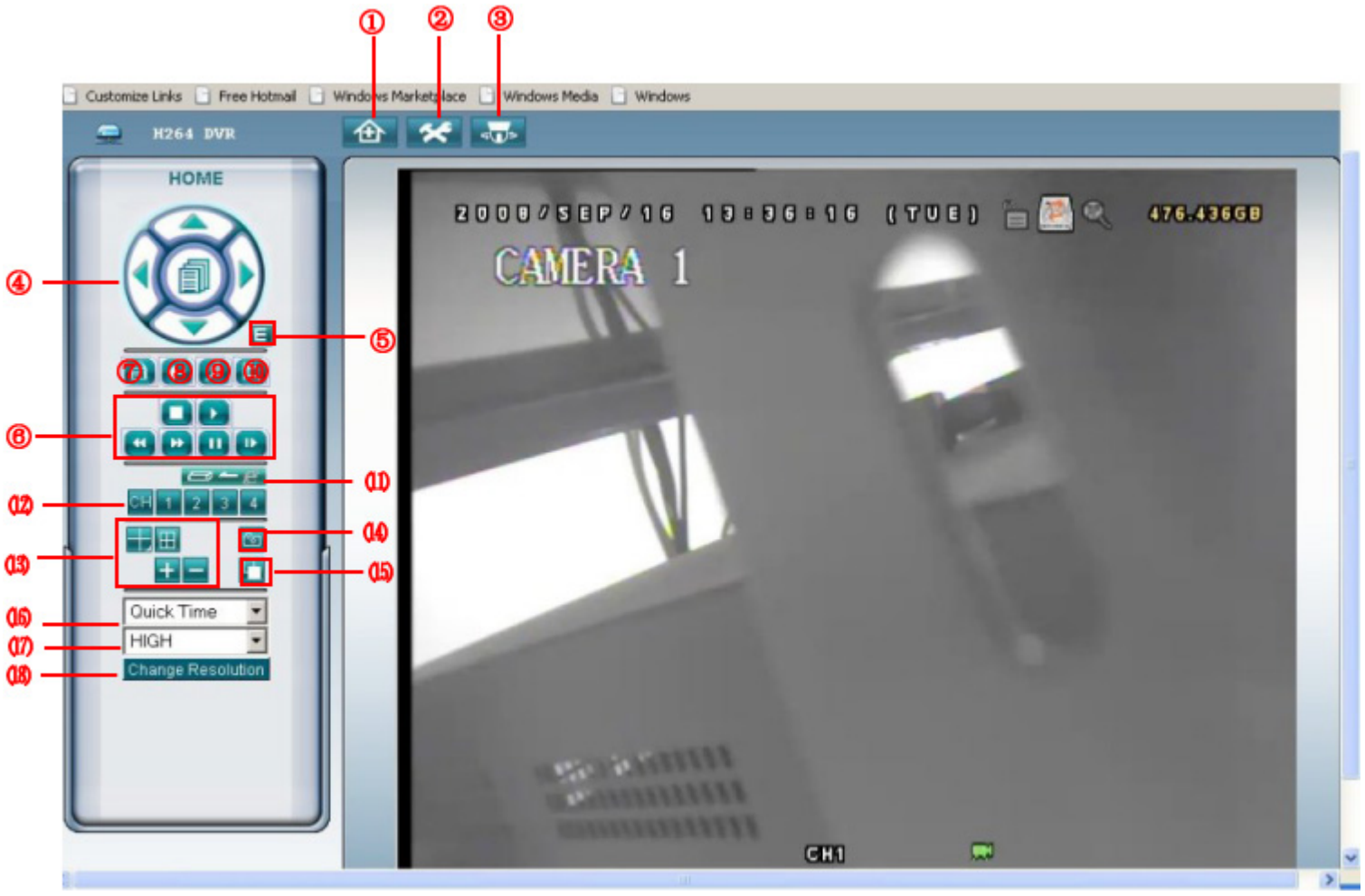
8.4 Mozilla Firefox

You can also use the Mozilla Firefox to remotely log into the DVR and check the live view only.

Note: The supported PC operation systems are Windows 2000 and Windows XP and Vista. You need to have QuickTime installed in you operation system first.

Step 1: Key in the IP address used by your DVR in the URL address box, such as 60.121.46.236, and press Enter. You will be prompted to enter the user name and password to access the DVR.
If the port number your DVR used is NOT 80, you need to key in the port number additionally. The format is ***ipaddress*:*portnum***. For example, for IP address 60.121.46.236 and port No. 888, please key in ”http://60.121.46.236:888” into the URL address box, and press “Enter”.

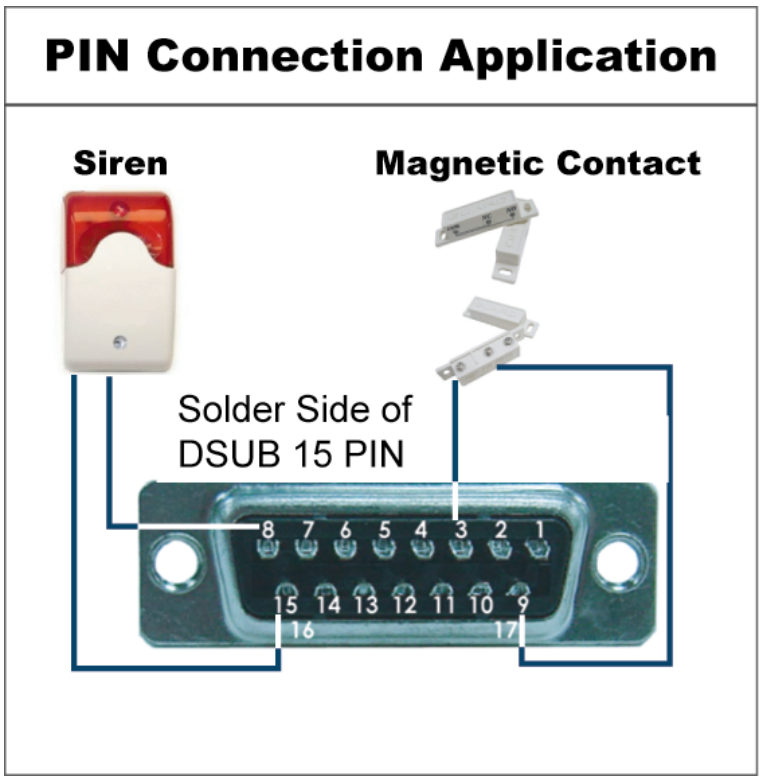
Step 2: Enter the user name and password, the same as the ones used at AP login, and click “OK”. You will see a similar screen as the following when the login information is correct.



NO.	Function	Description
1	Home	Click to go to the main page of the DVR
2	Config.	Click to go to the detailed DVR setting.
3	PTZ	Click to enter the PTZ mode.
4	Menu and Arrow Keys	Click to enter the menu / exit the menu mode. Click the arrow keys to move the cursor and make the selection: / : Move the cursor up / down to select the previous / next menu or sub-menu function, or change the setting. / : Move the cursor left / right to the previous / next sub-menu items.
5	Event	Click to enter the playback search settings screen.
6	Key Lock	Click to enable the DVR key lock function. To unlock the DVR, key in your password, and click .
7	Enter	Click to confirm the setting or enter your selection.
8	Digital Zoom	Click to zoom in / out the selected channel image.
9	Search	Click to enter the DVR full search menu. You can check all the logs here, and select one of them to payback.

NO.	Function	Description
10	Playback control buttons	(Stop) / (Play) / (Rewind) / (Forward) / (Pause) / (Slow Playback) **Rewind / Forward** Click once to get 4X fast rewind / forward, twice to get 8X, three times to get 16X, and four times to get 32X the highest. **Slow Playback** Click once to get 4X slow playback and twice to get 8X slow playback.
11	Network Independent On/Off	: Click it to activate / inactivate the network independent function.
12	Single Channel Selection	Click the channel No. (CH1 ~ CH4) to see the live view of the selected channel. You can also click or to go to the previous / next channel of the selected channel.
13	Display Mode	Click to show 4-cut display.
14	Snapshot	Click to have a snapshot.
15	Full Sequence	**Full Sequence** Click to display each channel one by one in cycle. To exit from this display mode, click any channel display mode.
16	Web Transmission	**H.264 / MPEG4 / JPEG / QuickTime** QuickTime is Apple's multimedia software. You need to have QuickTime installed in you operation system first. When "QuickTime" is selected, you will be promoted to enter the user name and password to access the server of the DVR.
17	Change Quality	**Best / High / Middle / Low** Click to change the image quality.
18	Change Resolution	**4 CIF / CIF** Click to change the image resolution (4CIF: 720*480 / CIF: 352*240)

APPENDIX 1 PIN CONFIGURATION



Siren: When the DVR is triggered by alarm or motion, the COM connects with NO and the siren with strobe starts wailing and flashing.

Magnetic Contact: When the magnetic contact is opened, the alarm will be triggered and the recording is on.

PIN	FUNCTION	DESCRIPTION
1~2	PIN OFF	NA
3~6	ALARM INPUT	Connect ALARM INPUT (PIN 3 – 6) and GND (PIN 9) connector with wires. Once an alarm is triggered, the DVR will start recording and the buzzer will be on. PIN 3 is Alarm 1. Once the alarm is triggered, the CH1 of the DVR will start alarm-triggered recording. PIN 4 is Alarm 2. Once the alarm is triggered, the CH2 of the DVR will start alarm-triggered recording. PIN 5 is Alarm 3. Once the alarm is triggered, the CH3 of the DVR will start alarm-triggered recording. PIN 6 is Alarm 4. Once the alarm is triggered, the CH4 of the DVR will start alarm-triggered recording.
7	NC	Under the normal operation, COM connects with NC and disconnects from NO. But when any alarm is triggered, COM disconnects with NC and connects with NO. Attention: The voltage restriction is under DC24V 1A.
8	NO	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.
9	GND	GROUND
10	RS485-B	Using RS-485 serial communication signals, DVR can be controlled by keyboard controller.
11	RS485-A	Using RS-485 serial communication signals, DVR can be controlled by keyboard controller.
12~14	PIN OFF	NA
15	EXTERNAL ALARM COM	Under the normal operation, COM disconnects with NO. But when any alarm is triggered, COM connects with NO. Attention: The voltage restriction is under DC24V 1A.

APPENDIX 2 RECORDING TIME TABLE

The recording time is tested under the PAL system, and the testing environment is a normal office, just for reference only.

The recording time may vary depending on the following three factors:

- Different camera resolution;
- Different picture complexity;
- Different frequency of the object movement

Record mode	Quality	IPS	MB/Hour	750GB Record Time (day)
Frame	BEST	25	925	33.78
		12	650	48.08
		7	520	60.10
		3	445	70.22
	HIGH	25	875	35.71
		12	620	50.40
		7	475	65.79
		3	421	74.23
	NORMAL	25	865	36.13
		12	600	52.08
		7	450	69.44
		3	400	78.13
	BASIC	25	768	40.69
		12	570	54.82
		7	440	71.02
		3	385	81.17
FIELD	BEST	50	900	34.72
		25	800	39.06
		12	580	53.88
		7	460	67.93
	HIGH	50	890	35.11
		25	780	40.06
		12	540	57.87
		7	450	69.44
	NORMAL	50	865	36.13
		25	740	42.23
		12	460	67.93
		7	440	71.02
	BASIC	50	790	39.56
		25	720	43.40
		12	450	69.44
		7	430	72.67
CIF	BEST	100	1010	30.94
		50	720	43.40
		25	540	57.87
		12	455	68.68
	HIGH	100	910	34.34
		50	635	49.21
		25	510	61.27
		12	435	71.84
	NORMAL	100	875	35.71
		50	600	52.08
		25	480	65.10
		12	420	74.40
	BASIC	100	805	38.82
		50	570	54.82
		25	450	69.44
		12	410	76.22

APPENDIX 3 COMPATIBLE USB FLASH DRIVE BRAND

Please upgrade the firmware of the DVR to the latest version to ensure the accuracy of the following table. If the USB flash drive is not supported by the DVR, the "USB ERROR" message will be shown on the screen.

Note: Please use your PC to format the USB flash drive as "FAT 32".

MANUFACTURER	MODEL	CAPACITY
Transcend	JetFlash TS8GJFV30	8GB
	JetFlash TS16GJF2A	16GB
Kingston	Data Traveller DTI	1GB
PQI	Traceling Disk U172	4GB
Apacer	AH220	1GB
	AH320	1GB
		2GB
		4GB
		8GB
Adata	G02G	2GB
	D14	8GB
Sandisk	Cruzer Color+	2GB
	Cruzer Color Micro Skin	2GB
		4GB
Sony	Micro Vault	1GB
	Green Micro Vault Tiny	2GB
	Purple Micro Vault Tiny	4GB
MSI	F200	4GB
Netac	U208	1GB

APPENDIX 4 COMPATIBLE HDD BRAND

Please upgrade the firmware of the DVR to the latest version to ensure the accuracy of the following table.

MANUFACTURER	MODEL	CAPACITY	ROTATION
HITACHI	HDS721680PLA380	80GB	7200 rpm
	HDT725032VLA360	320GB	7200 rpm
	HDS721010KLA330	1000GB	7200 rpm
Maxtor	STM3500320AS	500GB	7200 rpm
	STM3750330AS	750GB	7200 rpm
Seagate	ST31000340AS	1000GB	7200 rpm
	ST31000340SV	1000GB	7200 rpm
Western Digital	WD5000AACS	500GB	7200 rpm
	WD5000KS	500GB	7200 rpm
	WD7500AAKS	750GB	7200 rpm
	WD10EACS	1000GB	7200 rpm

APPENDIX 5 TROUBLESHOOTING

Please refer to the table below for easy troubleshooting. The table describes some typical problems and also their solutions. Please check them before calling your DVR dealer.

- **FAQ (Frequently ask question)**

Questions	Solutions
No power	Check power cord connection.
	Confirm that there is power supplied from the outlet.
DVR is not working when pressing any button	You might be under “Key Lock” mode. Press any key and enter the password to exit this mode.
HDD detection failed	Replace with another HDD for testing.
	Replace with another HDD cable for testing.
	Make sure HDD “Master”, “Slave” mode is correctly set.
Can’t detect your USB flash drive	Replace with another USB flash drive for testing.
	Format the USB flash drive as FAT 32 format and try again.
No live video	Confirm the camera is power supplied.
	Check the setting of the camera lens.
	Check the monitor’s video cable and connection.
	Check the camera’s video cable and connection.
No recorded video	Check if the HDD is installed and connected properly.
	Check the “MANUAL RECORD ENABLE” is set to “ON” , and the record function in the “CAMERA” menu is set to “ON” too.
Timer recording is not working	Check if “TIMER RECORD ENABLE” option is set to “ON” and the timer schedule has been arranged.
Motion detection recording is not working	Check if “EVENT RECORD ENABLE” option is set to “ON”.
	Check the detection function “DET” is set to “ON”.
	Check the detection area “AREA” has been setup.
Can’t play the recorded data on my DVR	There must be at least 8192 images of recorded data for playback to work properly. If not, your DVR will stop the playback. For example, if the IPS is set to 30, the recording time should be at least 273 seconds (8192 images / 30 IPS) for the playback to work properly.
Can’t backup the video with audio	Make sure the audio cameras are connected to the DVR channels which support the audio function (CH1, CH2, CH3 and CH4).
Can’t view the DVR images over the network with IE web browser	Check the DVR firmware version.
	Please choose to allow the web browser ActiveX or applet in the pop-out message.
Failed to backup the recorded files of the DVR from remote PC side. (For details, please see “Network Backup” at page 37.)	You need to be a supervisor to operate this function. For details, please see “Account” at page 48.
	Check if the network connection information is correct (IP Address / Port / User Name / Password).
	Specify the hard disk (HDD Number) and channel number (Channel) within which have the recorded data you need.
Failed to upgrade the firmware / OSD file	Check the USB flash drive is format to FAT32.
	Check the firmware / OSD is correct.
Can’t use the IR remote control	Check whether if the batteries are installed or not.
	Aiming at the IR receiving zone to control the DVR operation.
	Check the lock button on the DVR front panel is switched to the right position.

APPENDIX 6 DEFAULT VALUE

- **Default Value**

Items	Default Value
• **DVR Side:**	
ADMIN Password	0000
Channel Title Display	ON
Event Status Display	ON
Record Format	CIF
Record Quality	BEST
Image Per Second (IPS)	120 (NTSC) / 100 (PAL)
Record Timer	OFF
Detection Timer	OFF
Date Format	Y/M/D
Daylight Saving	OFF
Camera – BRIG (Brightness)	128
Camera – CONT (Contrast)	098
Camera – SATU (Saturation)	128
Camera – HUE	128
Camera – COV (Covert Screen)	OFF
Camera – REC	ON
Detection	OFF
Detection - LS	07
Detection - SS	03
Detection - TS	02
Detection - RE	10
Detection - Alarm	OFF
Alert Buzzer	ON
Alert Buzzer Duration	5 seconds
Network - IP Address	192.168.1.10
Port	80
De-interlace	ON
Quad Dwell Duration	3 seconds
Full Screen Dwell Duration	3 seconds
Manual/ Event/ Timer Record	ON
Event Record IPS	120 (NTSC) / 100 (PAL)
Timer Record IPS	120 (NTSC) / 100 (PAL)
Pre-alarm Record	ON
Serial Type	RS485
Baud Rate	2400
Host ID	0
Auto Keylock (SEC)	30
Language	English (Multi-lingual OSD selectable)
• **AP Side:**	
User Name	admin
Password	admin
Port	80
IP Address	192.168.1.10